## Final Background Research

My final topic is about sorting waste and I am particularly interested in sorting what goes into compost bins. I plan to make an interactive game to teach UCD students, staff, and faculty what can be put into recycling, compost, or landfill bins. Therefore, I researched what materials can be composted, successful compost systems in the world, and how to make a game with JavaScript.

In the first article, I learned that it is common for people to be confused about what goes into compost. There is a misconception that only "natural" things go into compost. However "natural" does not entirely describe what can be placed in compost bins. The article declares that compost includes all food or paper and cardboard soiled with food. Yet, if the paper or cardboard has a shiny coating, then it cannot be composted and instead needs to be recycled. Furthermore I learned that recycling includes cardboard, paper, hard plastic, and foil, but it has to be clean and dry. Everything that does not follow these rules goes into the trash that will be sent to a landfill. The article provided photographs of common objects people do not know how to properly throw away and gave a description of how to dispose them. After reading this article I learned why it is a difficult process to sort trash and makes me want to think of more ways to make this process easier for everyone.

Secondly, I learned that there is a Japanese town called Kamikatsu that plans to be zero waste by 2020. They started a zero waste mission in 2002 after fearing the bad health and environmental effects of burning trash in their town. To implement zero waste, they have a system that includes all residents to sort their waste in 34 categories. Residents personally bring their sorted waste to a recycling center where workers check to ensure waste is sorted in the proper bins. At first this was a very difficult task for residents, but over time sorting trash became second nature to them. Their extra effort has paid off and now the town recycles 80% of its trash. Few cities in the US recycle that much. On average, the US only recycles 34%. We have a considerably low percentage because only two companies control our waste management and these companies profit from landfills. Our recycling percentage is also low due to our political agenda not trying to prevent waste from degrading our environment. I hope that making an interactive game could help UCD eventually reach their zero waste goal similar to Kamikatsu.

Lastly I read an article about making a game with JavaScript. The article pinpointed certain elements to think about and include when you are creating a game. I learned that the process is not too difficult. Making a JavaScript game has a lot of the same elements that we have already learned about in class. For example the article states you have to first make a canvas with JavaScript. Then to make your game more engaging, it is important to add images by using "bgReady" to tell the computer when it is safe to draw the image. I read that you have to define variables, store user/ player input, and reset functions, which are all things we have started learning in class exercises. The article also mentioned it is important to update objects with a modifier, render objects, and create a main game loop that controls the flow of the game. Although this article describes a game that is not exactly like the game I want to create, it has given me more information on what I may need to include in my own interactive game.