Video Game Design

“Return to Ice”

Highland Springs, Virginia

2024

Team Identification Number:

VGDHS~22165-1

Table of Contents

Title Page -- - - - - - - - - - - - - -- - - - - 1
Table of Contents - 2
Game Purpose and Description - 3
The Target Audience - 3
Explanation of How to Play the Game - 4
Hand-Drawn Storyboard - - - - - - - - - - - - - - - - - -- - - - - - - - - - - - - - - - - - - 5
Student Copyright Checklist - - - - - - - - -- 6
Plan Of Work Log - - - - - - - - - - - - - - - -- 7-9

Game Purpose and Description

The purpose of the game is to teach kids about climate change while being educational and interactive at the same time. This will give younger kids a preliminary introduction to climate change. The concept of climate change is incorporated into this game as it shows the displacement of animals and the effect it has on the environment. While the game features an extreme example of this, it mirrors the eventual consequences over time of climate change. The game features a large bird that flies its way across terrain consisting of desert, mountain, forest, and snow. The bird collects snow to keep itself from melting as it makes its way across different environments with various temperatures and conditions. Even though a cabin seems to be the bird's final destination, it was originally his home from which he was displaced, going on a tremendous journey to reunite with his owner.

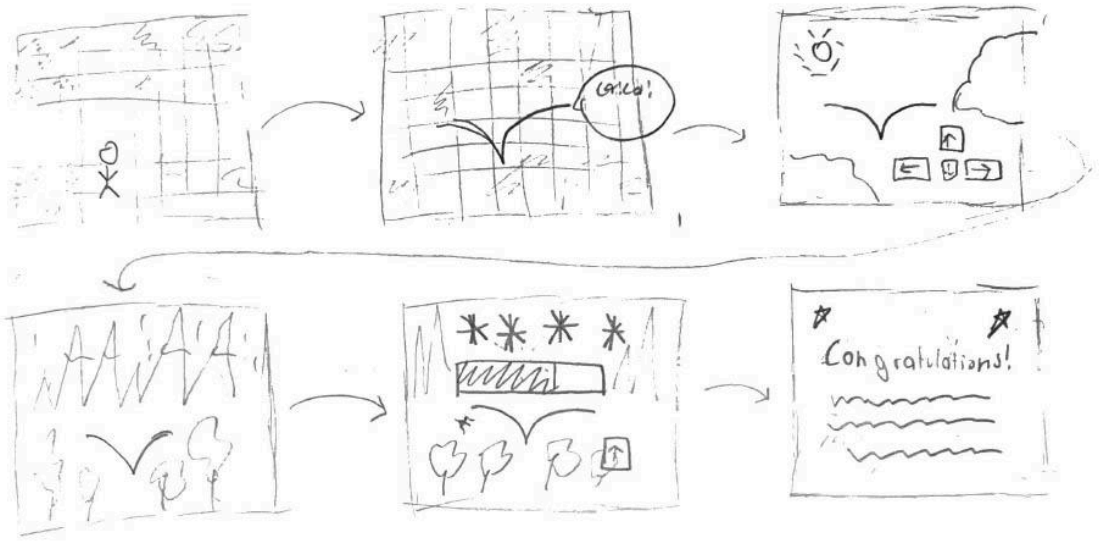
The Target Audience

The target audience of the game is younger kids, especially those 8 to 13 years old. This is because while the game strives to be entertaining and fun, there is also an aspect of learning in regards to climate change and its effects. While even younger kids may be able to possibly play this game, kids between the ages of 8 to 13 years old will better understand the message and purpose behind the game and will be more likely to consider and understand this crucial real-world topic.

Explanation of How to Play the Game:

As mentioned previously, the game features a bird that flies through varying environments. As it flies, the game objective is to collect snow to prevent the bird from melting. Over time, the bird slowly runs out of health as it endures the heat and you must save the creature until it reaches the snow by collecting floating snow particles, increasing the health of the bird. In terms of controls, the game features the usage of all arrow keys and the lettered alphabet on the keyboard, including the letters W, A, S, and D. Regarding the arrows, as anticipated, the arrows control the flight of the bird, as the up key flies the bird up, down moves the bird down, left moves the bird left, and the right arrow moves the bird right. The W, A, S, and D keys on the alphabetic keyboard also perform the same functions, corresponding to the same placement as the keys. As you control and maneuver the flight of the bird, you must collect as many snow icons as possible while the bird's health bar decreases. If you fly the bird too far down and it hits the ground, the level is restarted, beginning at the start of the type of terrain. Upon completion, when the bird survives and reaches a cabin in the snow, you will be greeted with a congratulatory end screen that has a deeper meaning to the game's purpose.

Hand-Drawn Storyboard



"Return to Ice"
Video Game Design
Development Storyboard

STUDENT COPYRIGHT CHECKLIST *(for students to complete and advisors to verify)*

STUDENT: Answer question 1 below.

1) Does your solution to the competitive event integrate any type of music and/or sound? ☐ YES ☑ NO

If NO, go to question 2.

If YES, is the music and/or sound copyrighted? ☐ YES ☐ NO

If YES, move to question 1A. If NO, move to question 1B.

1A) Have you asked for author permission to use the music and/or sound in your solution and included that permission (letter/form) in your documentation? If YES, move to question 2. If NO, ask for permission and if permission is granted, include the permission in your documentation.

1B) Is the music/sound royalty free, or did you create the music/sound yourself? If YES, cite the royalty free music/sound OR your original music/sound properly in your documentation.

CHAPTER ADVISOR: Sign below regarding your student's answer(s) to the use of music/sound in his/her competitive event solution. Even if your student answers "NO" to question 1, please sign below noting that you have evaluated the competitive event solution and the student answered the question(s) accurately.

I, _____ (chapter advisor), have checked my student's solution and confirm that any use of music/sound is done so with proper permission and is cited correctly in the student's documentation and/or the solution has been found to have no music/sound included.

STUDENT: Answer question 2 below.

2) Does your solution to the competitive event integrate any graphics/videos? ☐ YES ☑ NO

If NO, go to question 3.

If YES, is(are) the graphics/videos copyrighted, registered and/or trademarked? ☐ YES ☐ NO

If YES, move to question 2A. If NO, move to question 2B.

2A) Have you asked for author permission to use the graphics and/or videos in your solution and included a permission (letter/form) in your documentation for graphic/video used? If YES, move to question 3. If NO, ask for permission and if permission is granted, include the permission in your documentation.

2B) Is(are) the graphics/videos royalty free, or did you create your own graphic? If YES, cite the royalty free graphics/videos OR your own original graphics/videos properly in your documentation.

CHAPTER ADVISOR: Sign below regarding your student's answer(s) to the use of graphics/videos in his/her competitive event solution. Even if your student answers "NO" to question 2, please sign below noting that you have evaluated the competitive event solution and the student answered the question(s) accurately.

I, _____ (chapter advisor), have checked my student's solution and confirm that the use of graphics/videos with proper permission and is cited correctly in the student's documentation and/or the solution has been found to have no graphics/videos included.

STUDENT: Answer question 3 below.

3) Does your solution to the competitive event use another's thoughts or research? ☐ YES ☑ NO

If NO, this is the end of the checklist.

If YES, have you properly cited other's thoughts or research in your documentation? ☐ YES ☐ NO

CHAPTER ADVISOR: Sign below regarding your student's answer(s) to having integrated any thoughts/research of others in his/her competitive event solution. Even if your student answers "NO" to question 3, please sign below noting that you have evaluated the competitive event solution and the student answered the question(s) accurately.

I, _____ (chapter advisor), have checked my student's solution and confirm that the use of the thoughts/research of others is done so with proper permission and is cited correctly in the student's documentation and/or the solution has been found to have all original thought with no use of other's thoughts/research.

Student Name: Aahil Syed, Prithvi Chakraborty

Chapter Advisor Signature: _____

Plan of Work Log

Technology Student Association Plan of Work				
Date	Task	Time Involved	Team member responsible	Comments
2/19/2024	Brainstorm	2 hours	Aahil Syed and Prithvi Chakraborty	Discussed Challenge and Potential Ideas
2/20/2024	Brainstorm	2 hours	Prithvi Chakraborty and Aahil Syed	Further discussed ideas and narrowed down potential game ideas
2/21/2024	Brainstorm	1 hour	Aahil Syed and Prithvi Chakraborty	Finalized idea to center game around
2/22/2024	Coding/Programming	2 hours	Aahil Syed	Explored different languages and possibilities to code game on
2/23/2024	Documentation Portfolio	1 hours	Prithvi Chakraborty	Began the documentation portfolio, completing background information and general outline
2/24/2024	Coding/Programming	5 hours	Aahil Syed	Determined coding language to utilize and began testing different commands
2/25/2024	Documentation Portfolio	2 hours	Prithvi Chakraborty	Began writing and completed game purpose

				and description portion
2/25/2024	Coding/Programming	5 hours	Aahil Syed	Created terrain for the game.
2/26/2024	Documentation Portfolio	1 hour	Prithvi Chakraborty	Determined and described target audience portion of portfolio
2/27/2024	Coding/Programming	2 hours	Aahil Syed	Programming for development of video game and completion of first draft
2/27/2024	Testing	1 hour	Prithvi Chakraborty and Aahil Syed	Testing the first draft of the video game and discussed potential areas of weakness and necessities for improvement
2/28/2024	Coding/Programming	5 hours	Aahil Syed	Programming for the development of video game.
2/28/2024	Testing	30 minutes	Prithvi Chakraborty	Tested the latest version of the video game and suggested potential improvements
2/29/2024	Documentation Portfolio	1 hours	Prithvi Chakraborty	Reflection and creation of hand-drawn storyboards.
2/29/2024	Coding/Programming	3 hours	Aahil Syed	Accepted changes and completely finished game

				development
3/1/2024	Documentation Portfolio	4 hours	Prithvi Chakraborty	Tested the final product to write a section explaining how to play the game and game controls. Made final touches/ edits. Finished Documentation Portfolio.