

# Map Maker's Guide to Hawai'i

Game Design Document - EGD 220-05 Team 2 Sprint 3

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## Intent

Explore the islands of Hawai'i and the indigenous cultures that call it home! **Map Maker's Guide to Hawai'i** is an educational map-making game for students from 1st to 3rd grade. Students will play as a cartographer studying the archipelago of Hawai'i through the lens of the people who live there, working hard to get a better understanding of native Hawaiian culture from the ground up.

Map Maker's Guide is designed to go hand in hand with an in-class lecture on the indigenous people of Hawai'i, and to engage with the students that learn best when they are left to their own devices and have more control over their experience. The aim is to create a space that is fun to navigate, educational and well-researched about the content, and open to player-driven exploration and learning while still offering an experience refined enough to ensure that the player will be learning new things no matter where they go to explore.

## Potential Audience

### Quantic Foundry

While Quantic Foundry has not done research on children specifically, its categories are still a useful tool. For these purposes, we will be aiming for the **Discovery** and **Completion** motivations (Yee). While our game is meant to be used in the context of a classroom, we want to make it as easy as possible for students to discover at their own pace. The islands are complex, and breaking it down into smaller pieces will make it easier for younger students to learn and process the information. They will also get to feel like they are guiding their own learning, and giving more



agency to students keeps them more engaged. There is also the completion element of filling in the whole map, and gaining an overview of everything the student already learned.

For overall gamer type, we are looking towards Architects. These are players that value a strong narrative and aesthetic, but prefer gameplay at their own pace and deeper interaction with the story. In a classroom setting, this means focusing on students who want to learn at their own pace, and want to explore the topics more deeply as they go.

## Balancing Students, Parents and Teachers

Because this is a game for a classroom, we have three different audiences to consider: Students, Parents, and Teachers. For students, we need to ensure that the actual gameplay is enjoyable and that the information is presented in a way that young children can understand. For teachers, we need to be sure that all of our research is accurate and relevant to the types of lessons that a lower elementary school class would be having. For parents, we want to ensure that the information we are presenting is accurate and relatively unbiased in order to avoid irritating people with certain beliefs, particularly about Hawaiian colonization and the rights of indigenous people.

## Designing for the Audience

Because we are designing games for young children, we will have to put in additional effort to maintain their attention. We will address this by filling our game with tons of user feedback, so that even when we are teaching them, the students will never feel bored. We will present information in small, easy-to-process bites that are understandable even without context, so that students can guide their own learning process and build their understanding even if they started knowing nothing about the islands.

## Monetization

### Lesson Plan Packages

This game will be sold over teacher-focused lesson plan sites like Teachers Pay Teachers for a price of \$7.99. After buying a copy, the teacher will be able to use it as a single copy for their class to share. This is also available for school libraries to purchase, in order to

have students play in the library on individual computers. Teachers looking to give this game to all of their students should go through the school's bulk purchasing.

## Sold to Schools

This game is well suited to be sold directly to schools in bulk. Schools may purchase this game for all of their students at a rate of roughly \$3.99 per user, for anywhere from 50 - 999 users. After this purchase, the school will be able to assign these copies to classrooms, students, or libraries as they choose to distribute. Copies given to students will also be available to access outside of school.

## Digital Game Marketplaces

This game would be published on platforms like Steam and Itch.io for a price of \$9.99. These are increased prices as opposed to the ones offered for direct-to-educator prices, since it is expected that those will be purchased in larger quantities.

We will also have the option to set up itch.io community copies should buyers be willing to pay additional costs, which will offer free copies of our game to people who want to play but cannot afford to pay full price. By paying double the regular price, a buyer can add one community copy to the community pool.

## No Advertisements

In order to follow FCC educational television guidelines, advertisement space must be limited to roughly 10 minutes of advertisement per hour of content. As our game is aimed to last roughly 15 minutes, it would not be possible to run advertisements on it without violating its educational integrity.

## Context and Content

### Story

An ambitious cartographer is looking to map out the Hawaiian islands, but to do that they want to learn directly from the people who have lived there the longest. Put together the sections of the map that you've gathered from the indigenous people of the island, and put them

together to get a stronger understanding of the island as a whole. Each piece comes with information about the people you gathered it from, so the cartographer will learn about both the physical and cultural landscape of the island as they put it together.

## Relation to Game Space

In the simplest sense, the game's story is about putting together a map. The cartographer has gathered all of the pieces from the various people on the island, and now they just have to put them together physically and conceptually. In the game, this is represented by physically clicking and dragging map pieces into an outline of the island, like you would do in a puzzle. The information gained from the indigenous people is shown through short informational pop-ups that appear whenever the player successfully places a piece of the map. The entire game takes place inside the pages of the cartographer's atlas, which adds to the narrative sense of being the mapmaker putting the map together.

## Player Motivation

### Learning/Discovery

The main motivation for players is to simply learn more about the indigenous people of Hawai'i. All parts of the game aim to make expanding the player's knowledge more free and enjoyable. The island and region modes encourage discovering new parts of the map and learning about areas they've mapped, while exploration mode grants the player total freedom to look at the island and the regions within it.

The Quiz mode also supports this, as it rewards players that took the time to actually study the map at their own pace and read through the informational prompts by giving them a higher quiz score.

### Completion

During gameplay, completion is one of the core elements. The main goal is to complete the entire map, and within each region there are subgoals to complete path-making challenges. Each time the player completes something, they will be rewarded with plenty of positive visual and audio feedback, including the entire island filling with color as the player completes it.

## Game States

### Start State

At the start of the game, the player will be presented with a navigation screen to decide whether to start the game, go to a help/tutorial screen, or go directly to the main game map/level, the island state.

### Island State

After starting the game, the player will be put into the island state. In this state, they will be attempting to fit regions of a map into an outline of the island that they belong to. Getting a map piece in the correct place will send the player to the region state for that map piece. After all map regions have been correctly placed, the player will go to the completion state.

### Region State

In each region state, the player will have to click and drag to draw a path from a group of indigenous people through all of the resources they need to collect as efficiently as possible. They will have to avoid obstacles to reach all of the resources. After they complete this, the player will be sent back to the island state.

### Completion State

After completing the map of an island, all pieces will lock in place and the player will temporarily lose control of the game as the map plays an animation to fill it with color, and Hawaiian-inspired music plays in the background. After this, the player will gain control back and will be able to choose whether to enter exploration state or quiz state.

### Exploration State

In this state, the player is able to freely examine the island. Clicking on various parts of it will show informational popups about the people and cultures of that area. The player can choose to enter quiz state at any time.

## Quiz State

In the quiz state, the player must answer questions about the information they've gathered so far. They will not be penalized for a poor score, but they will be scored. After completing the quiz, the player may choose to reenter exploration state, or go directly to the end state.

## End State

After completing the quiz, the player is allowed to end the game. They go through the credits, and are shown some follow-up sources to further their information.

# Game Systems

## Island Mode

At the start of the game, the player is presented with an outline of the island they're trying to complete and a collection of map regions to fill the outline in with.

- Map regions can be dragged and dropped into the outline (see: "Region Dragging and Dropping" in mechanics)
- When a region has been placed in the correct spot, the player will be put into the path-making mode for that region.
- When the entire map is complete, it will fill with color and the player will have the choice to enter either exploration mode or quiz mode.
  - The player can always go to quiz mode from exploration mode, and after finishing quiz mode may return to exploration mode.

## Path-Making Mode

Each region has its own path-making mode, based on the people that live there and the things they need to collect.

- There will be resources around the region that the player must guide the people to (see "Path-Making" in mechanics)
- There are obstacles around the area that the player cannot draw a path through.
  - These will either be natural things like mountains and volcanoes, or man-made things like cities or highways.

- The player has a limited amount of length to draw the path with, indicated in the UI.
- Once a player finishes the path-making mode for a region, they will be returned to Island mode.

## Exploration Mode

After finishing the map, the player can explore the information they've gained freely.

- Players can click around the map to view the information they've learned (see "Information Reviewing" in mechanics)
- The player can enter quiz mode from exploration mode at any time.

## Quiz Mode

After learning about an entire island, the player can enter quiz mode to test themselves on what they learned.

- A number of facts will show up in the box, which players will have to place in the region that they apply to (see "Question Answering" in mechanics).
- Some of the questions will be taken directly from the information pop-ups, while others must be inferred from the path-making mode.
- At the end, the player will see how many questions they got correctly.
  - After they finish, the player will be returned to exploration mode.

## Information Pop-Ups

As part of the UI, whenever the player completes a region information will appear on the screen about the people that live there.

- These can be closed by clicking outside of them.
- The information will be written at a 3rd grade reading level.
- The information will be about the culture of the indigenous people in the area and some of the hardships they face.

## Screens and Transitions

The game takes place in a cartographer's atlas, so all of the screens and transitions are book themed.

- The start screen will be the front page of the book.

- There will be options to go to the credits screen, the help screen, and the main game.
- Screen transitions will look like a page turning.

## User Feedback Animations & Sounds

Whenever the player completes an area and while they are playing, there will be many animations and sound effects to show feedback for what they've done.

- After a region is placed correctly, a fun animation will play and a zoom animation will transition the game to path-making mode.
- After completing a region's path-making mode, a fun animation will play.
  - These two will have the same sound effect.
- There will be an animation for the informational pop-ups as they appear to draw attention to them.
  - These will have a unique sound effect.
- When the map is complete, there will be an animation as it fills with color.
  - This will have music playing as it happens.

## UI Elements

The game will have many UI elements to indicate parts of the gameplay.

- In Island and Quiz mode, there will be a UI panel where the region map pieces are stored and the quiz information popups appear.
  - In Quiz mode there will also be a text box indicating how many questions the player has answered correctly.
- In path-making mode there will be a bar to indicate how much length the player has left for their path.
- In exploration mode and island mode, there will be UI popups to show information about areas and resources.



## Game Mechanics

### Region Dragging and Dropping

While in island mode, the player can drag and drop regions of the island map from a small box at an edge of the screen into the map outline.

- If the region is in the wrong location when the mouse button is released, the piece will return to the box
- If the region is in the right place, it will snap to the location.
  - After this point, the region can no longer be dragged and dropped or moved in any way.
  - After a region has been placed correctly, the player will enter that region's path-making mode.

### Path-Making

While in path-making mode, the player can click on a starting area representing a group of indigenous people and must draw a path from them through all of the resources they need to gather.

- The player must draw the path through all the resources to succeed.
  - Some of these can be physical, like fresh water or food, and some can be more abstract, like access to religious sites.
- The player has a limited amount of length to draw the path with. If they run out of length, they must restart the path.
- If the player releases the mouse button before finishing, they must restart the path.

### Question Answering

In Quiz/Review mode, the player will need to answer questions by associating information with the people in different regions. They will be shown a number of pieces of information, and must put them in the right place.

- This is done by dragging the information from the same box that once held the region maps, and dropping them onto the completed map over the right region.
- Each correct answer will increase the player's quiz score

- After a wrong answer the player will be shown where the information was supposed to go.
  - They may not retry after they have been shown the correct answer.

## Information Reviewing

The player can always go back and look at the information that they've learned from a region or island.

- Single clicking on an already complete region while in island or exploration mode will show that region's information pop-up
  - Double-clicking on an already complete region while in island or exploration mode will send the player into that region's path-making mode.
- Clicking on a resource present in a region's map will show the player that resource's information pop-up
- Clicking anywhere else on the screen will close the pop-up

## Aesthetic Direction

### Aesthetics Overview

Aesthetically, our game is built to embody the spirit of Hawaiian culture while still promoting a focus on learning. We want the game to be aesthetically pleasing, interesting, and fun, but not in a way that will distract or detract from the information that we are trying to convey. We want the player to feel strongly as if they are the one discovering the information on their own, so the game's narrative is about a cartographer putting together an atlas. That ties together the story with the art, as many of the visuals will revolve around these sorts of empty map drawings. The Hawaiian art style will be brought in at the end when the player has completed an island, in order to emphasize how the player now has a greater understanding of the culture.

### Visual Direction

The main goal of the visual direction is to make the player feel like they are the one mapping out the island. The game will be set in an in-progress book, with parts of the map separate from the overall segments of the game. After the player has completed an island, it will

be cohesive and culturally inspired by traditional Hawaiian art.. The art of the islands and UI will be inspired by Kapa, a form of traditional Hawaiian art made with dyed fabrics.

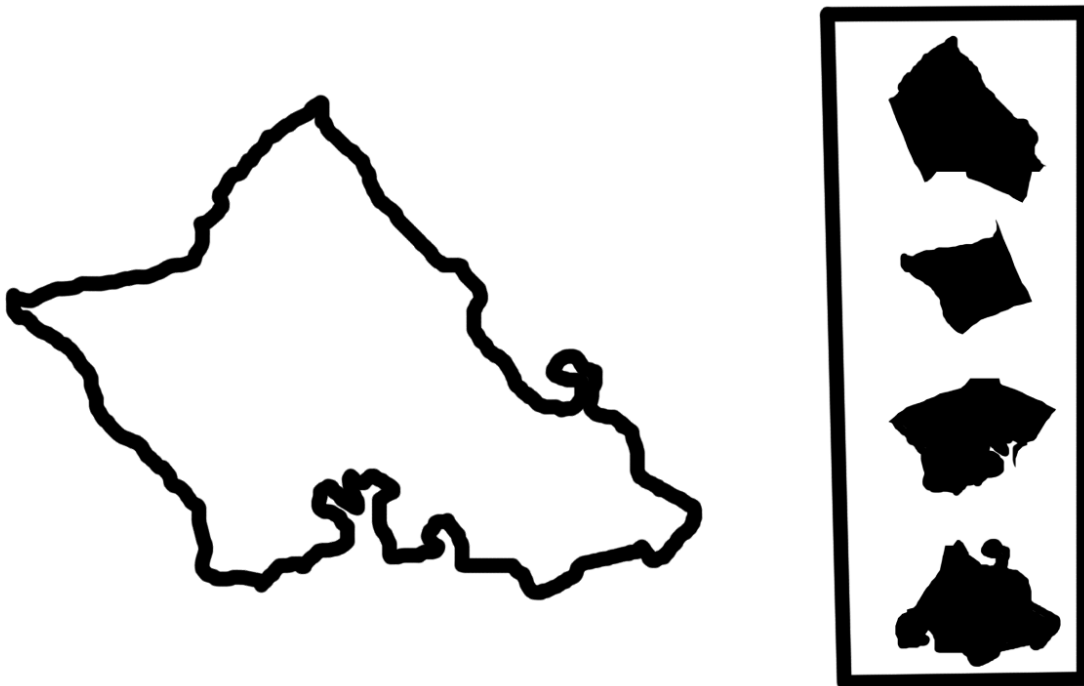
## Audio Direction

The audio of the direction will support the atmosphere of Hawaii and the concept of creating an atlas. We will have music inspired by traditional Hawaiian music for the background of the game, with sound effects of the book's pages turning and the breeze across the islands to add to the ambience. We will also have lots of sounds for user feedback, to encourage them to put the map together and be rewarded when it's completed.

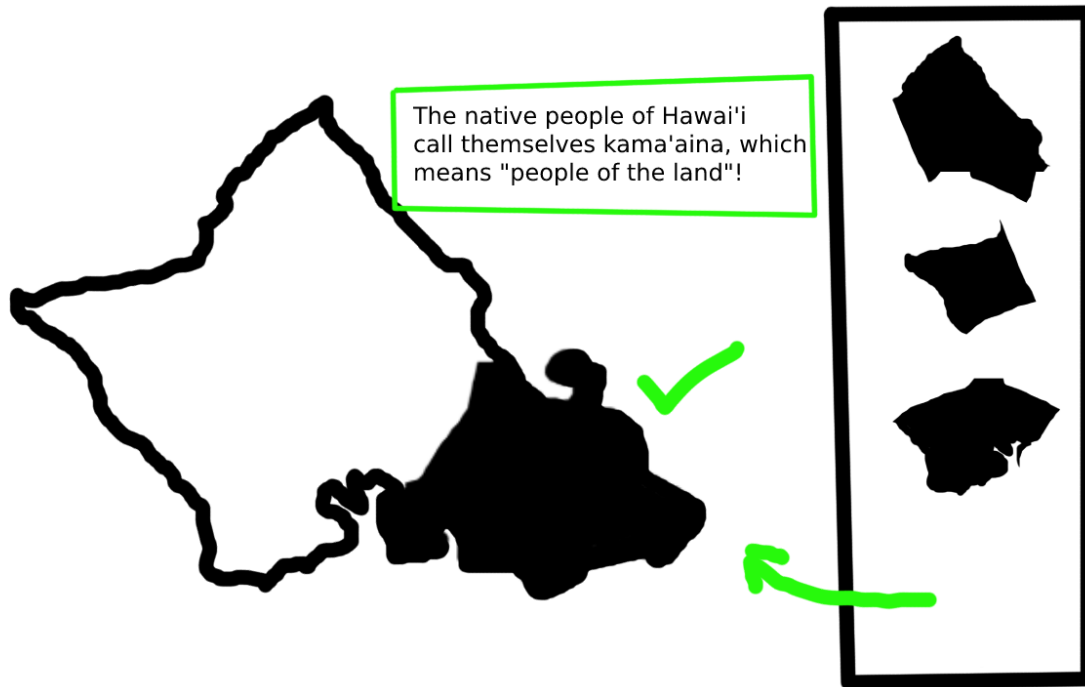
All of the audio in our game should be focused on two things: the ambience/atmosphere of the game, and the feedback of the game. We want to ensure that we are portraying Hawaiian culture accurately, while also keeping the players engaged with strong feedback.

## Example

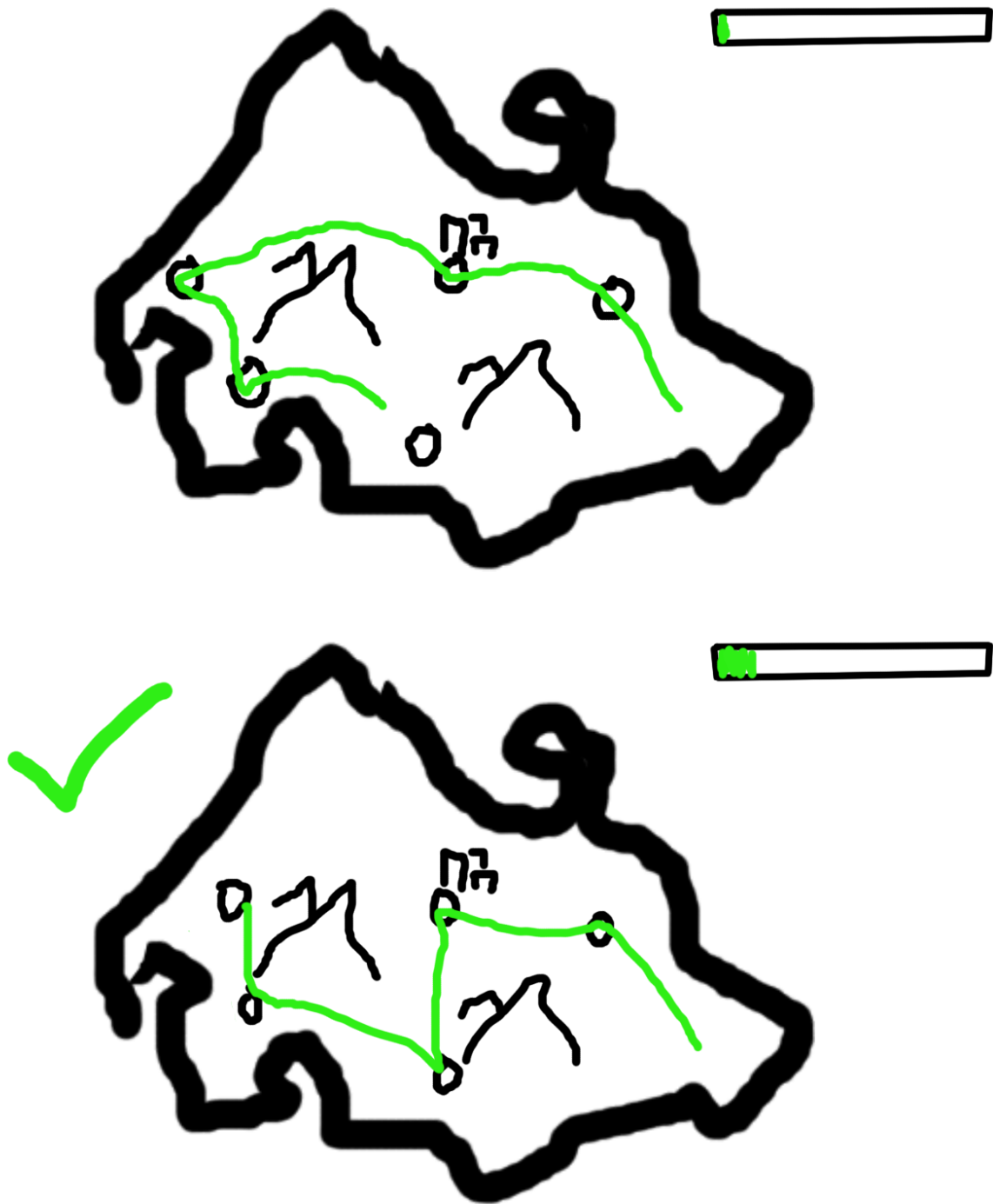
Our player begins their play session on the second level, a map of the island of O'ahu (the level in our prototype will be the island of Hawai'i, this is only an example). They look at the map outline, and see that one of the coastline lines up perfectly with one of their box's map pieces.



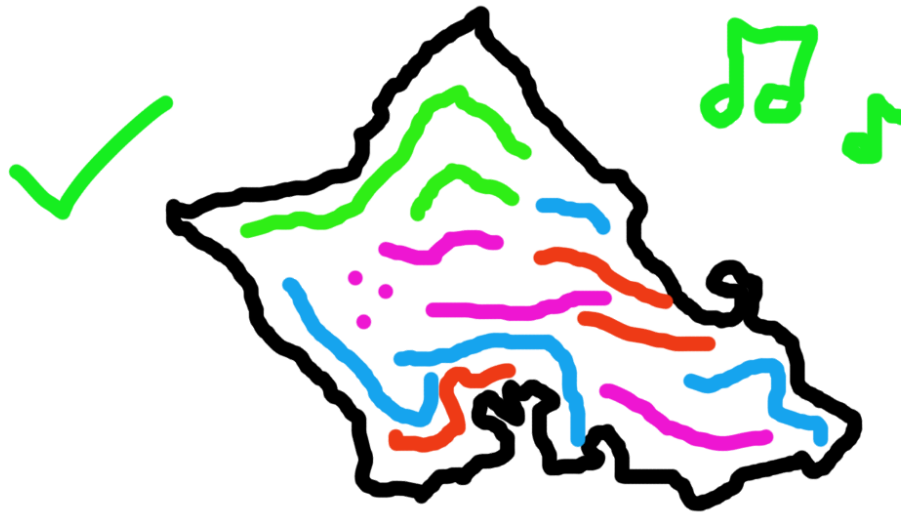
They drag the piece in, and it snaps into place with a ding! A small text box pops up, telling the player about the area.



The map then zooms in, showing the player a larger view of the area they just completed. The player clicks and drags to start guiding the people of the region to the resources they need. They almost get there, but have run out of energy. They restart, and find a more efficient route. After they complete it this time, the map zooms out again.



The player repeats this process until finally, they've mapped out the whole island. As they place the last piece, music plays in the background and a final informational pop-up about the whole island appears. As the player clicks on, they are prompted to go to either the quiz mode or the exploration mode to continue.



## Works Cited

Yee, Nick. Quantic Foundry – The Science of Gamer Motivation. <https://quanticfoundry.com/>.  
Accessed 13 Feb. 2023.