‘COLOR ME SILLY’
GAME MANUAL

GITHUB LINK: HTTPS://GITHUB.COM/LUKAS0924/COLOR_THEORY-

Mission Statement

The educational game, ‘Color Me Silly,’ is a tool specifically designed to teach students the basics of color theory. The broad scope of our game enables students of all ages to derive some beneficial takeaway from our game, which they can then apply in their world. Whether that be utilizing new colors learned in fields within design and the arts, or simply knowing the primary colors. Both outcomes are important to us. Furthermore, the games’ pleasing aesthetic and intuitive design make playing our game and learning the foundation of color theory more enjoyable, which we hope will increase retention. Overall, the game is intended to be used as a supplement rather than a complete replacement to conventional education, but when coupled with such conventional education, our game enhances the color theory learning experience.

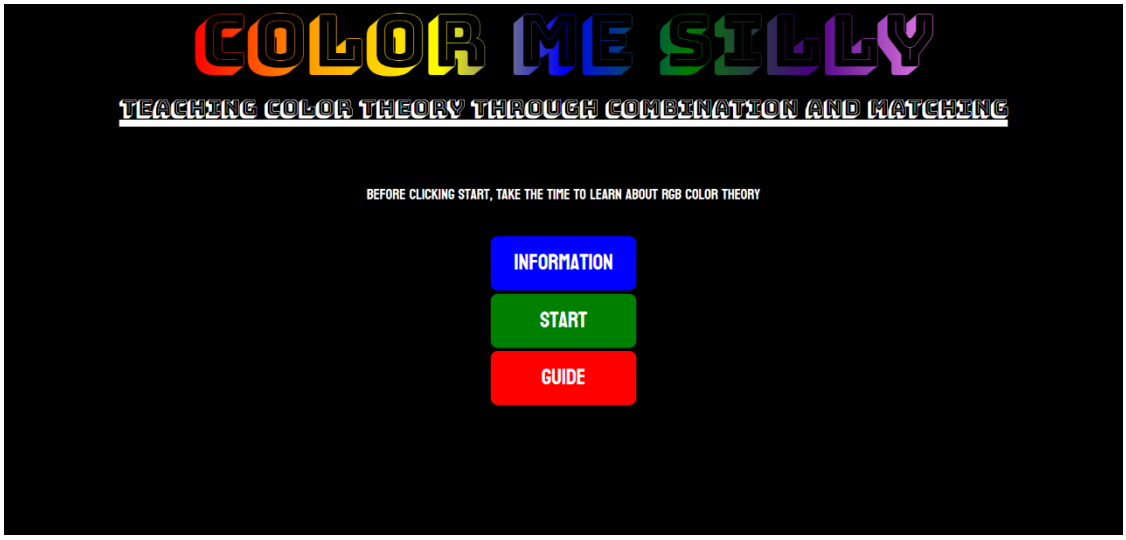
What is Color Theory?

Color theory is both the science and art of using color. It explains how humans perceive color, and how colors mix, match, or contrast with each other. Color theory also conveys the ways in which colors interact with each other in the natural world, as well as how to create certain colors through the addition or subtraction of color. The foundation, which is where our games’ focal point lies, is comprised of a breakdown of colors into specific categories: primary, secondary, and tertiary colors. For clarity, there are more colors than just primary, secondary, and tertiary colors, but the colors within these three categories are where most of the common colors we encounter in our daily lives fall into. Lastly, we believe that color theory vital to know if one seeks to go into a field within the arts.

Instructions (Home Screen)

To start, each player will be greeted with an easy to navigate home screen comprised of our title, 'Color Me Silly,' as well as introductory text, an information button, start button, and guide button. We advise every player to begin by clicking on the information button to learn a general overview of color theory.

Home Screen:



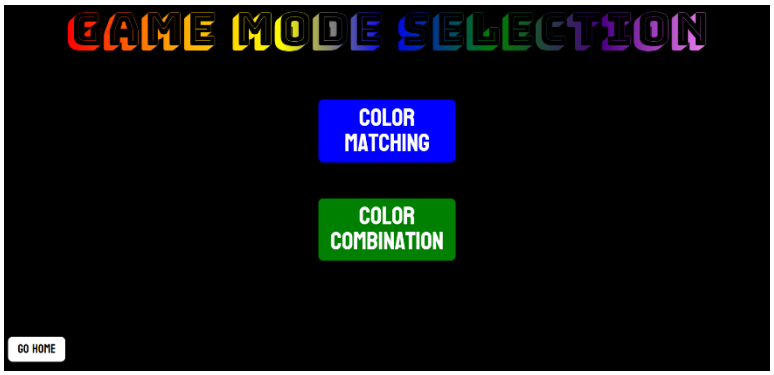
This is the home screen for our game. Using your mouse and cursor, each player will be able to navigate the game with the use of these three buttons: information, start, and guide, which denote where the player can go within the game.

Information Screen:

Firstly, clicking "INFORMATION" will take the player to the helpful information page, which will give a general overview of color theory. This page is intended to make game play easy for everyone.

Instructions (Home Screen)

Start Screen:



Secondly, clicking 'START' will take the player to the game selection screen, which is where they will choose one of our two unique game modes, color identification or color combination.

Guide Screen:

Lastly, clicking 'GUIDE' will take the player to a screen which will convey the necessary information to be able to play our game and its two game modes

Instructions (Game Modes)

'Color Me Silly' includes two unique game modes that build upon each other. These game modes are color identification and color matching. We recommend that players begin with playing color identification to establish a knowledge of the colors they will use to successfully retain the color combinations they will make in the color combination game mode.

Color Identification: Levels 1

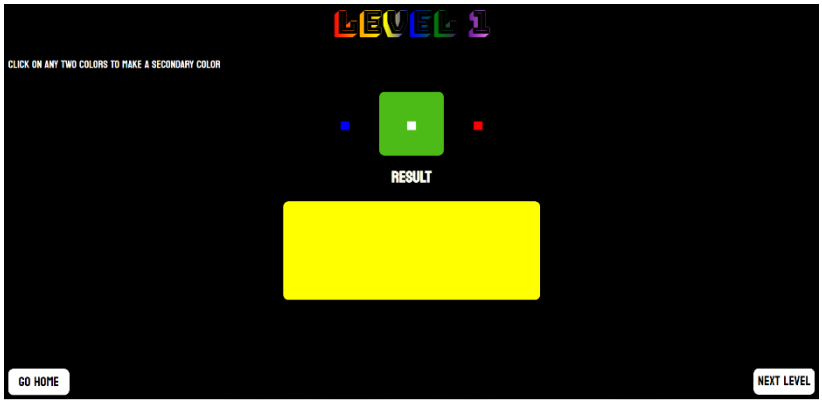
For the color identification game mode, each player will see anywhere from 6-12 clickable-colored boxes and a prompt explaining the intent of the level. For instance, level 1 tasks the player to select all primary colors. To complete this particular level, a score of 3 much be reached, which corresponds to all three primary colors being correctly selected. In the event that a wrong color is selected, a player has the option to restart the level or continue to the next

Color Identification: Levels 3

This is what the final level, Tertiary Colors, will look like once the player correctly selects all six tertiary colors that correspond with the prompt. Additionally, this is the final level for the color identification game mode. The finish button will redirect the player back to the home screen to either read the instructions, learn more about color theory, or play more.

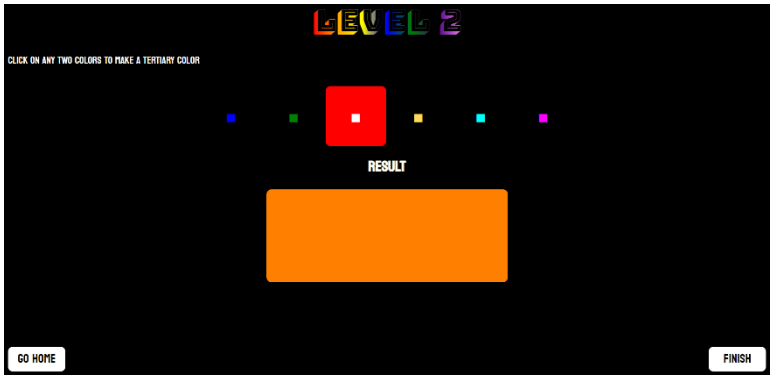
Instructions (Game Modes)

Color Combination: Levels 1



For the color combination game mode, the interface will be exactly the same as the color identification game mode. Although, the task for this mode is to combine colors using the buttons to make new colors, which will then appear in the box below them after a combination is made. For instance, level one tasks the player to use the three primary colors to make secondary colors. Scoring is not tallied, as this mode is intended to solely reinforce and build upon the content, colors, learning in the color identification game mode.

Color Combination: Levels 2

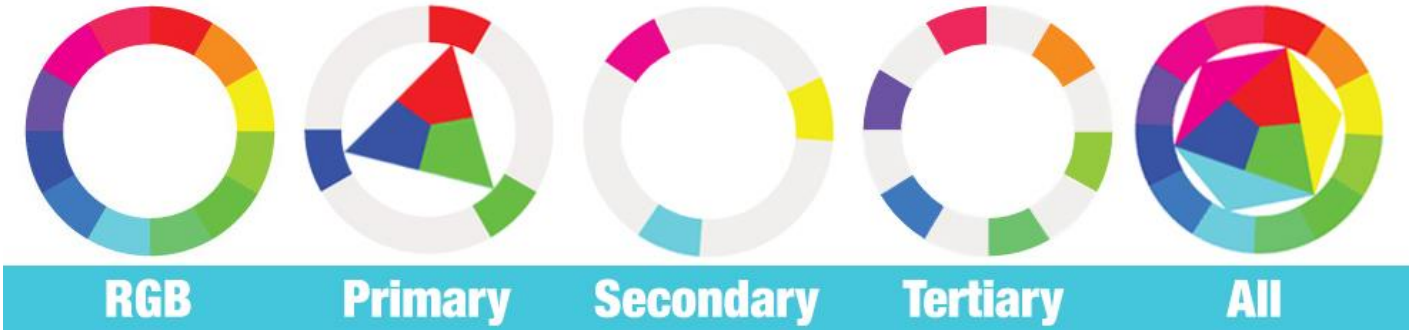


This is the second and final level within the color combination game mode. The process to play is the same as level 1, but the prompt this time is to make tertiary colors. This task requests the player to tie in the knowledge they learned while playing the color identification game mode. Once this level is completed, the player has the option to player go back to the home screen to either read the instructions, learn more about color theory, or play more.

Development Process

First Steps:

The development of 'Color Me Silly' began with much confusion. Most members of our group had basic to no experience at all coding or making a game. This did not stop us but ensured our initial phases of development would be difficult. This is evident since our client wanted a product that would enhance the color theory learning experience by utilizing an interactive game with clear patterns, replay ability, an engaging and intuitive design, and game modes that support one another. To even begin development, we had to first give ourselves a crash course into the world of color theory, which ended up being more complicated than we initially thought. This crash course enabled us to begin the formative steps of brainstorming ideas regarding how we would take Mr. Bowyer's vision and translate that vision onto the screen. Our ideas consisted of dividing the game into two distinct game modes that build upon one another and enhance the retention rate of color theory by having the player perform various tasks within these two game modes. These two modes are color identification, where the player is tasked with identifying primary, secondary, and tertiary colors; and color combination, which is where the player matches primary colors to make secondary colors, and primary and secondary colors to make tertiary colors. These two distinct modes enhance the educational experience of the other, and don't stand alone very well. This notion of two halves to make a whole gave us the framework we needed to ensure Mr. Bowyer's vision would come to fruition. Overall, after deciding the creative trajectory of our game with the guidance of our client, we began by creating a rough draft of our game with html files. Below, I will describe the process taken for each feature coupled with its main contributors. But first, the RGB color wheel is what Mr. Bowyer wanted his game to revolve around in terms of content.



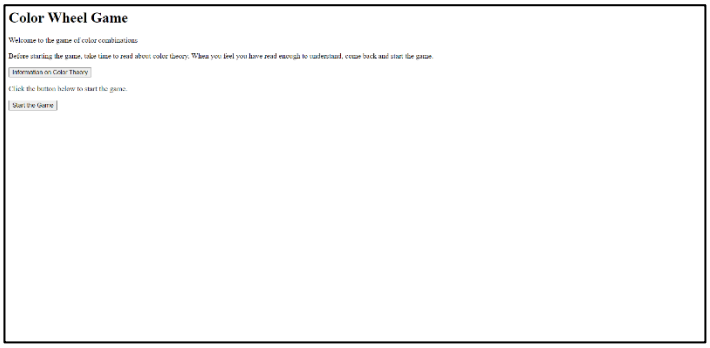
url: https://www.rocketstock.com/blog/color-theory-for-motion-design/

Development Process

Interface (Home Screen Serving as Inspiration):

The interface design of the home screen is where our group derived all of its inspiration for the design of the rest of the game. The intent of the home screen is to draw in the player through pleasing aesthetics, clear information/text, and an intuitive layout. Furthermore, the layout is inviting and conveys to the player that 'Color Me Silly' is indeed a game. The home screen is comprised of a title, subtitle, background information for clarity, and three buttons: information, start, and guide. As you can see below, this screen has come a long way, and our progress towards our definitive version is exemplified.

Original Version



Lukas initiated the charge and created the black and white framework seen below, which was comprised of all necessary information. He began by creating a server, so the html home screen file could be functional and viewable. Then, he added clarifying text to denote what our game is and buttons to take player to pages we would make in the future. It was very bare bones, but it was progress.

Final Product

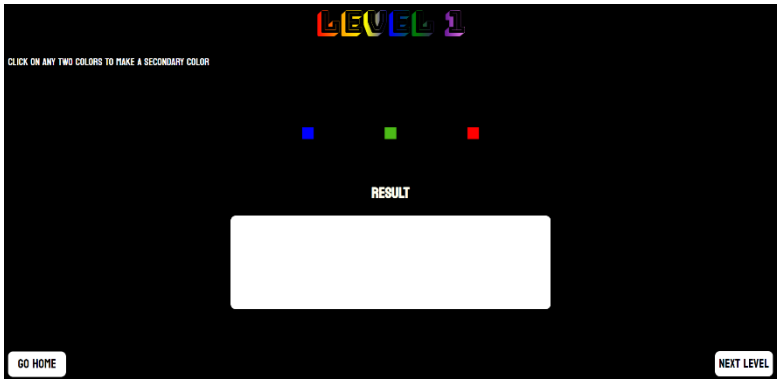
To enhance the visual experience, Christian Johnson took this framework and created a general theme that is consistent and pleasing to the eye. He learned how to utilize css and html to spruce up the home screen. He began by importing fonts for the informative text. This proved very difficult for him but gave him the introduction into coding he needed to be a reliable asset to the team. Furthermore, he then spruced up the buttons and colored them to be the three primary colors that the game revolves around. We can safely say everything we wanted in our home screen is in it.

Development Process

Interface Theme Established:

After receiving the green light to carry the general theme of the home screen over to the rest of the game, Christian Johnson spruced up and added game prompts to the following html files: level1.html, level2.html, primarycolorlevel.html, secondarycolorlevel.html, and tertiarycolorlevel.html. Additionally, he made the information.html and guide.html page. What made our design progression possible was the work Nick Murphy and Lukas Smith did to create the framework of these levels. Particularly Nick Murphy's work in making the buttons and making sure they were aesthetically pleasing. Although, the process to get to our final product was turbulent to say the least. Given that none of the group really had any idea what we were doing, we had to learn almost everything as we went. For instance, Christian and Nick wanted to implement text boxes that would appear after every successful or unsuccessful combination or identification to provide a richer experience for older players. We also wanted to make the scoring system more explicit and a more vital part of the game, but we frankly ran out of time and unsuccessfully tried to write the JavaScript for the html and css files we created for it. Lukas then tried to halt his progression in making our buttons function with JavaScript to assist Christian and Nick, but it was to no avail.

Primary Color Level Layout



Level 1 Layout

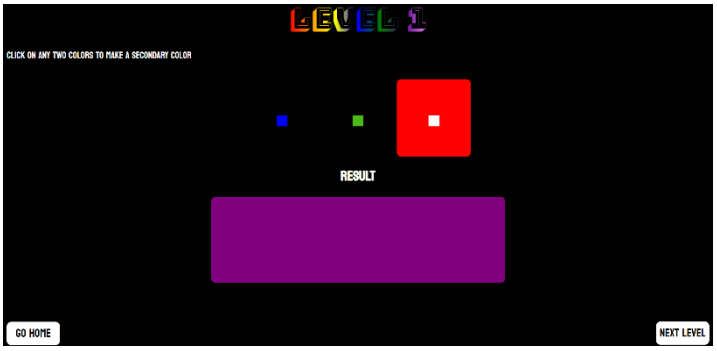
Development Process

Functionality Established:

At the beginning of the development process, Lukas created two buttons using html. These buttons were able to go to different html pages but had no JavaScript functions behind them. After learning some basic JavaScript, he started focusing on the functionality aspect of the game and left the html to Christian and Nick. There were many roadblocks in the beginning as it was all new, however, he was able to quickly learn and got the hang of things. Creating a series of functions that relied on each other, the vision was soon realized. These functions allowed a lot to happen behind the scenes. Buttons could now collect a series of information that corresponded to each other, be changed, and updated; all at the click of only two buttons. In the color combination version of the game, when two buttons are clicked, the result box is updated to show the color made by the two chosen colors by the player. The functions written for these buttons are reliant on each other and without one, the buttons would do nothing. Getting each function to work together in a way that resulted in exactly what was wanted proved to be a challenge, but not an unrealistic one. Lukas was able to complete the code and the game was soon fully functional. A feature we originally sought out was making a clickable color wheel rather than specific buttons.

Primary Level Functionality

Level 1 Functionality



Development Process

Lessons Learned:

Overall, we learned how to effectively collaborate and work as a team to achieve a goal set by a client. We found this beneficial as we will be placed under similar situations with time constraints in our respective professions post-college. Getting the ball rolling was quite sluggish, and we frequently got bogged down if something did not work in the initial stages. We fixated on big picture tasks rather than simply attacking the project step by step, which had us completing tasks with little direction. Utilizing a Kanban board and steel thread enabled us to track our progress, divide the labor, introduce, or redact certain features, and keep everyone on the same page. Our pace picked up after we started taking Nate's advise to divide and conquer and focus on smaller aspects of the bigger picture. Would we redo this experience? Probably not, but knowing that our client is extremely pleased and plans to use our game in his class next year made it all worth.