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Premise

In this grid based puzzle game, players will use knowledge of colors to complete puzzles. The player will be able to place three colored paint-beams, each being a primary color (red, yellow, and blue), at various locations on a grid. There will be various colored enemies around the grid. The objective of the game is to hit all the enemies with paint-beams that are of their contrasting color. To aim the paint-beam at the enemies the player can use mirrors to avoid obstacles. The player can also combine colors to create secondary colors using a special object that is used for this purpose. It will take in two colored paint-beams and shoot out another paint-beam that is the color of the two original paint-beams combined. This allows for six different colors to be at the player's disposal. (Example: A blue enemy is standing on a block. The player must aim a red and yellow at a combining object to create an orange paint-beam that must now be reflected so it can hit the enemy). There will be a set amount of objects the player will use in each puzzle. (See the assets section for complete list of the objects the player can use). I would also like to add in a level creation mechanic so players can create their own puzzles for others to play.

Genre

- Grid-based Puzzle

Platform

- Multimedia Fusion
- PC

Audience

- Casual gamers, male or female, high school aged
- Art students will enjoy the color aspects of the game
- Mastermind-Achiever (According to BrainHex)

Authorial Intent/Message

The reason I am making this game is to show level design and puzzle building skills. I also want to show my ability to create a game that is education but still fun. Many puzzle games use some color in small puzzles, I want to expand on that and use them as the main mechanic of my game.

Market Analysis

Grid-based puzzles games are pretty successful online for casual gamers. This game will fit in with the others, but stand out due to the theme and the use of colors as a main mechanic.

Narrative

None. Abstract colorful puzzle game that shows the player objects they can use to solve puzzles.

Mechanics

The basic mechanics of this game will be placing objects in the correct locations. The player will have to think ahead about how the objects will affect each other. Some objects will already be placed on the grid and cannot be moved, but can be rotated. Any objects that are given to the player in the inventory can be placed anywhere on the grid, but some will only work if they are connected to the power source. Some levels will have special mechanics to keep the game interesting (removing ability to rotate, lights going out/player having to memorize the map, etc).

The goal of the game is to clear all the levels of the enemies. Once it is complete, the player can create their own levels to let others play.

Controls

The mouse will be the only control that the player uses to play the game. They can use it to:

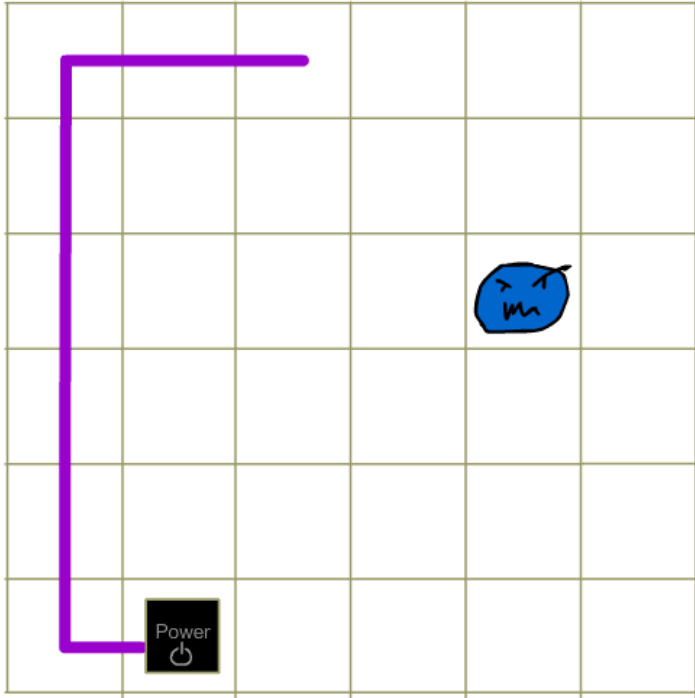
- Drag and drop paint-beams, mirrors, and combiners on the grid
- Click on a placed object to rotate it's direction
- Click a power button to turn on the paint-beams
- Click a reset button if all enemies were not destroyed
- Drag and drop objects when making their own level

Assets/Objects

- Paint-beams
 - o Red
 - o Blue
 - o Yellow
- Funnel/Mixer
 - o Combines colors and shoots a new paint-beam
- Power source
 - o All paint-beams must somehow be attached to this for them to be powered on
- Wires
 - o Used to connect paint-beams and power source
- Art Teacher Zombies
 - o Stationary, they will not move around the grid
 - o White enemies can be destroyed with any paint-beam
 - o Colored enemies can only be destroyed with a paint-beam of their contrasting color
- Tubes
 - o Used to redirect paint-beams
- Obstacles
 - o Paint Trails
 - Will only let paint-beams that are the same color they are through
 - o Black Block
 - Nothing can pass through the black block
- Bomb
 - o When hit with a certain color paint-beam, the bomb will explode and destroy anything around it, maybe opening a path for another paint-beam
- Super Awesome Color Separator
 - o When hit with a secondary colored paint-beam, it will break it down to the 2 primary colors again
 - o Helpful to get 2 paint-beams past obstacles
- Charger
 - o Hit with a certain colored paint-beam, charges up and acts as a power box
- Converter
 - o Change a paint-beam to its complimentary color

Sample Gameplay (Diagram)

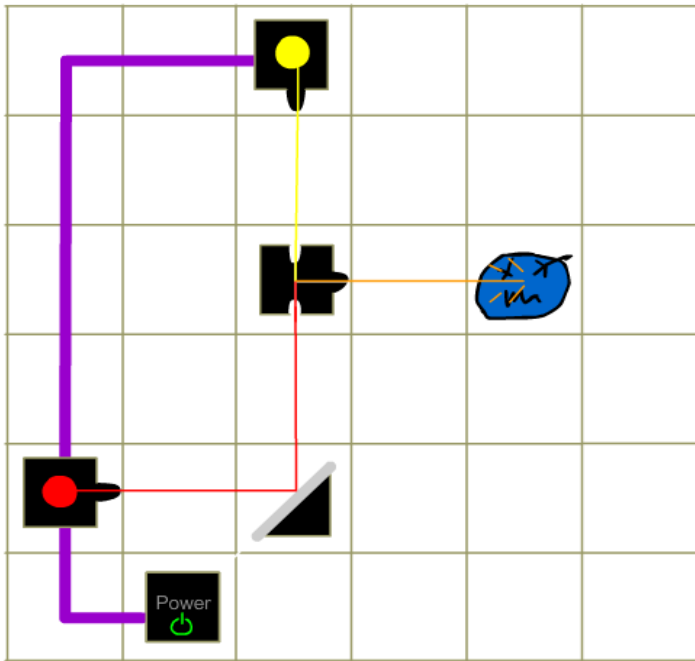
The player will first be presented with a menu that could show a high school board, how many puzzles are in the game. All the puzzles will be locked except for the first one. They click on it and are presented with the first grid which shows stationary objects and ones in their inventory (See first image on next page). There is a power box with a wire attached to it and one blue enemy a few blocks away. The player must drag and drop the objects in their inventory on the grid, and click on them to rotate. The grid should look like the second image when they have completed the puzzle. Then they will press the power box to turn on the paint-beam and watch as the events unfold. The puzzle has been solved, and the player can now go on to the next puzzle.



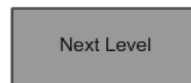
Inventory



Start Diagram



Inventory



Win Diagram

Technical Risk

This will be my first time using Multimedia Fusion, but I have seen other's use it and think I am fully capable of learning it enough to create this game before the semester is over. There are many other people I know that know how to use this tool, so I am not really worried about getting stuck on anything. I will allow myself some time to learn the engine and complete a few tutorials.

Milestones

Number and Date	Status
1 (9/19) Concept	
Finish concept doc	Finished
Learn Fusion	Finished/know enough to complete project
Have a grid that can snap objects onto it	Finished
Have objects able to be rotated and placed on grid	Finished
2 (10/10) Assets	
Power box makes paint-beams shoot	Finished
Paint-beams able to shoot	Finished
Enemy affected by paint-beam	Finished
Black block working	Finished
Tubes move paint beam	Finished
Converter	Finished
Focuser working	Finished
Unfocuser working	Finished
Bomb working	Finished
Charger working	Finished
3 (11/6) Level Builder	
Level Editor	Finished
Some levels built, find people interested in helping create levels	Finished
Interface/menu added	Finished
4 (11/21)	
At least 15 levels	Finished
Artwork for objects and levels	Finished (could add animations if I have time at end of semester)
Testing started	Finished
Have other people creating custom levels using the	All testers are asked to make a level

level editor	
5 (12/12)	
Finished product	Finished
Testing done	Many playtests have occurred
Sounds implemented	Finished
At least 30 levels	30

Closing

The game will do well due to a large casual target audience, and its ability to hold a player's attention. The puzzles will be designed well to make the player wanting to figure them out. The level editor will allow players to try to get others to play and try out their levels. Overall, I think this game can show that it is unique by its ability to be educational and fun at the same time.