

Humanity's Last Light

Game Design Document

Pirate Game Jam 14

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Spiflicate

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Image: The cover image for the game.

Introduction

Game Summary Pitch

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Humanity's Last Light is a first person horror puzzle game where you play as a scientist working on a space research facility in the future who is researching a mould that has the ability to adapt to its environment in search of food and mutates what it consumes. Suddenly, the mould manages to escape containment and begins to consume the facility, mutating the more it eats. The game consists of you and the mould playing mind games and you have to solve puzzles throughout and navigate the facility to escape while the mould continues its search for more food. The mould monster in the game has the ability to mutate and gain new abilities, making the game increasingly hard over time depending on how much the player manages the mould monster's consumption of food to mutate.

Inspiration

SOMA

In SOMA, you wake up in an underwater scientific research facilities and find that it, alongside the rest of the sites connected to it, has been taken over by mutated hostile humanoid entities once being the researchers of the facilities, as well as a cancerous growth of structure mould manipulated by the WAU. The player must traverse through the dilapidated facilities on their journey and avoid enemies that are roaming the facilities.

A lot of elements from SOMA were an inspiration for Humanity's Last Light, such as the mould spreading throughout the facility, a hostile entity resulting from it that chases you, the settings being a research facility, the reveal of the Earth in complete ruin, etc.



Images: The hostile entities chasing the player throughout the game and the cancerous growth of structure gel throughout the facility, similar to some ideas we have for Humanity's Last Light.

Dead Space

In Dead Space, Isaac Clarke is hunted down in the USG Ishimura by creatures known as Necromorphs, which are spawned from an infection caused by a structure called a "Marker". We thought the idea of being hunted down by an infestation would lend itself well to this game, as well as the theme of jam. And space is cool.



Images: Some examples of the necromorphs that hunt down Isaac Clarke throughout the game.

Mould idea: Slime mould

The slime mould has the ability to navigate a complex environment such as a maze in search of food. It can also build networks of itself to link itself together while searching for and consuming food. This inspired the overall idea of the mould in the game, which although has a highly-accelerated spread rate, spreads itself to search for food.

Can Slime Mould Solve Mazes? | Earth Science

Player Experience

The intended experience for the game is to keep the player tense throughout navigating the facility, with the hostile atmosphere and constant threat of danger forcing them to keep on their toes and think ahead to outsmart the mould, forced to make multiple decisions that could strengthen or weaken the mould, forcing different strategies depending on player choices.

Platform

This game will be designed for the Windows PC platform.

Development Software

- Game engine: Unity 2022.3.17f1
- 3D modelling software: Autodesk Maya 2024, Blender 4.0

Genre

This game will take on the puzzle horror genre with a focus on atmospheric horror. It will also be a singleplayer experience.

Target Audience

Humanity's Last Light takes on the horror genre, also introducing puzzle elements, meaning that the game will be directed at a more mature audience such as older teens and above, as well as horror game enthusiasts.

Concept

Gameplay Overview

In Humanity's Last Light, the player takes control of a researcher in first-person. The core gameplay consists of navigating throughout the game's level, that being the research facility set in space, and solving puzzles spread throughout, such as retrieving an item from one location and using it at another location; completing a code sequence using hints from elsewhere; etc., while also avoiding the antagonist of the game, that being the slime mould entity, who evolves over time depending on the amount of intervention from the player, forcing the player to adapt new tactics such as luring the entity elsewhere using sound once the entity gains the ability to hear. If the player fails to intervene with the slime mould and its spread and mutation, certain paths may become unavailable, forcing the player to use an alternative and possibly harder path to reach a destination.

Art

Theme Interpretation

XXXX **XXXX** XXXX

Mockup

While deciding on whether to go for a more toon-type artstyle or a more realistic one with slight cartoon-like aesthetics, we made a moodboard for both to compare the two art styles. We then used these moodboards to come to the decision that we'd opt for the more realistic artstyle.

Slightly Cartoony Standard Graphics



Image: A mockup of the artstyle we were aiming for, where there is some level of cartoony in an otherwise more realistic artstyle.

Design

XXXX XXXX XXXX

Level Design

Level Theme

The level design will be revolving around a space research facility theme, featuring more sterile and reflective metallic surfaces and more harsh lighting.

Inspirations

There were multiple sources that lead to the design of the scene, that being a space research facility, but there were two notable games that really made an impact, those being SOMA due to its futuristic-looking research facilities that, while are set underwater, look like they are designed for alternative climates (e.g. space); and Alien: Isolation, mainly for the design of the interiors, such as a more hexagonal shape of the corridors rather than a straight box type.



Images: Some reference photos of the interiors from SOMA.



Images: Some reference photos of the interiors from Alien: Isolation.

Areas & Layout

The layout of the level follows a more simple, kind of arcade-like style, while also being plausible enough with the setting being a facility in space. The main part of the level features the control room and its surrounding corridors, with research and testing rooms on each side on the inside and outside of each wing, followed by a suit/prep room that leads to an escape pod room through an airlock.

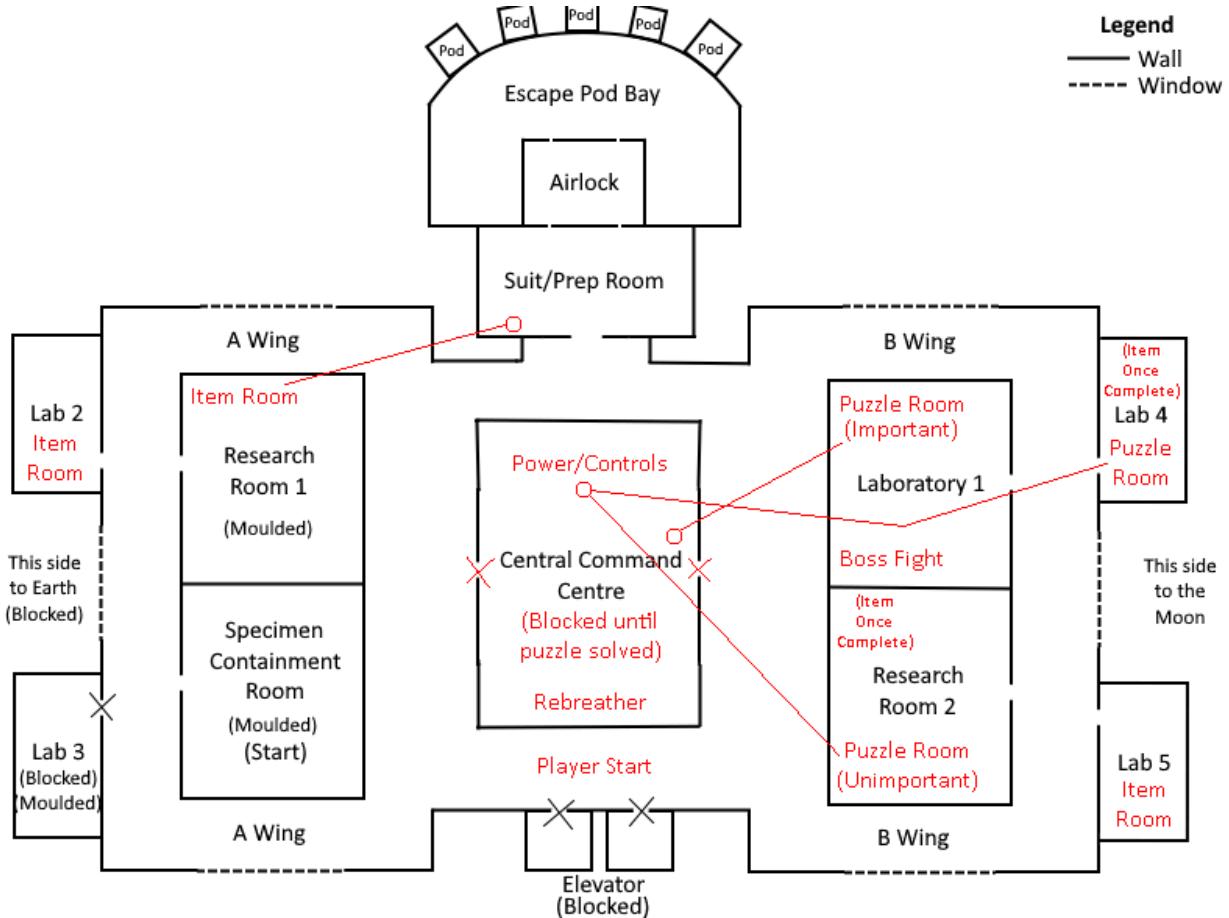


Image: The proposed level layout, labelled with room names and importance.

Game Flow

It is our aim to allow the player to complete the game in almost any order, save for a few special puzzles/mini boss fights that are crucial for game progression.

In this prototype with only 2 puzzles, the player will aim to swiftly solve puzzles before the facility is consumed, preventing the airlock from unlocking and trapping the player on the facility as the AI controlling it causes a meltdown in an attempt to destroy the unknown organism.

The proposed flow will be as follows:

- 1- Player starts and moves to clear any of the puzzles
- 2- As the player solves puzzles, the order in which they are solved may influence the strategies they use in solving the other puzzles
- 3- While the player solves puzzles, the facility AI is working to unlock the central command unit, which will serve as the halfway point.
- 4- The puzzles solved by the player in the time taken by the AI to unlock the central command unit will affect the way he goes about doing the boss fight
- 5- Each puzzle will have an item that is either necessary or optional for the completion of the puzzle
- 6- After the command centre is unlocked, the player will get the rebreather and then be forced into the boss fight
- 7- If the player loses in the boss fight he gets ending 2, but if he wins he progresses
- 8- After the player finishes the boss fight, he goes into a spore infested room to get an item needed to clear the suit room, which is needed to get the ability to access the airlock
- 9- After the player allows the airlock to be unlocked a chase sequence will start, and the outcome changes the ending
- 10- If the player reaches the airlock he gets ending 1, and if he is caught he gets ending 2

Endings

There will be a total of 2 endings detailed below:

Ending 1 will consist of the player failing at any point in time during the game, and will consist of the AI detonating the facility by causing the reactor to meltdown.
Getting caught by the mould at any time or failing to defeat the boss constitutes failure.

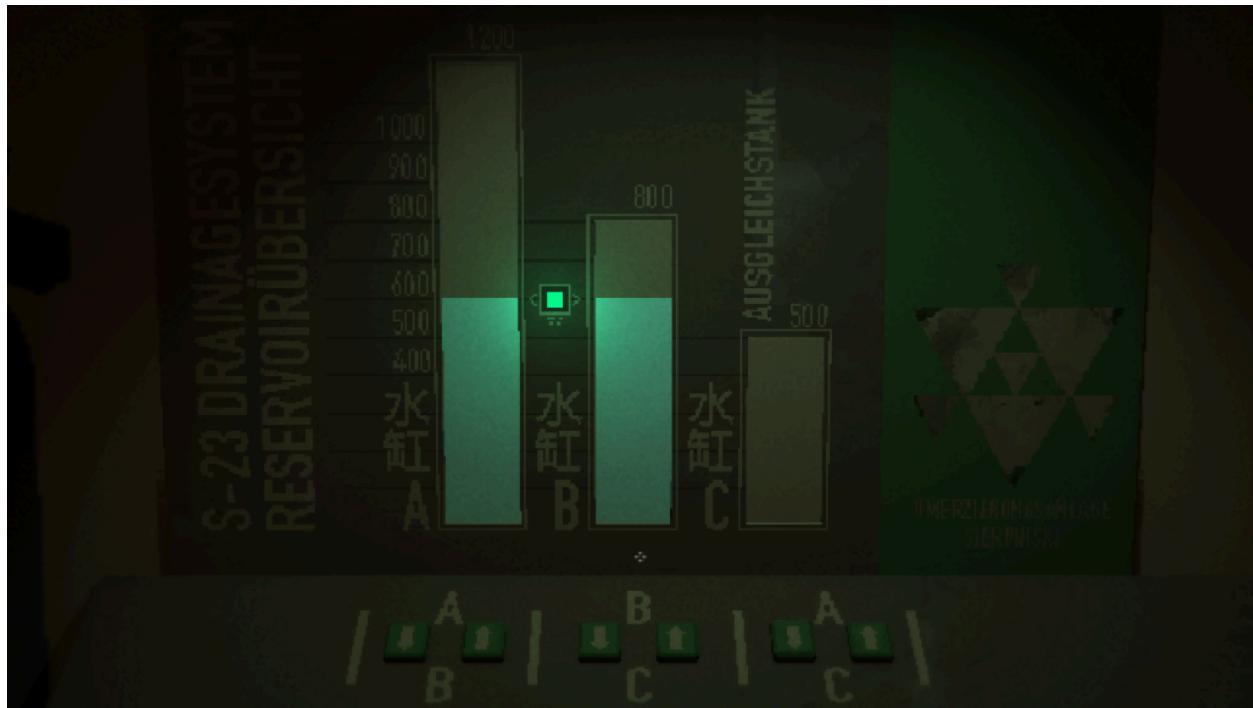
Ending 2 will consist of the player successfully escaping the facility and will be able to see the earth from the pod window, however there will be a certain surprise accompanying him...

Puzzles

There will be a total of 2 puzzles and 2 items featured in this prototype, they will be listed below:

Puzzle A

Puzzle A will consist of a resident evil type tank balance puzzle, the item for which will be an energy core. The bars will consist of LED blocks indicating power level to each sector of the reactor instead of a water gauge.



Puzzle 1 example, from signalis.

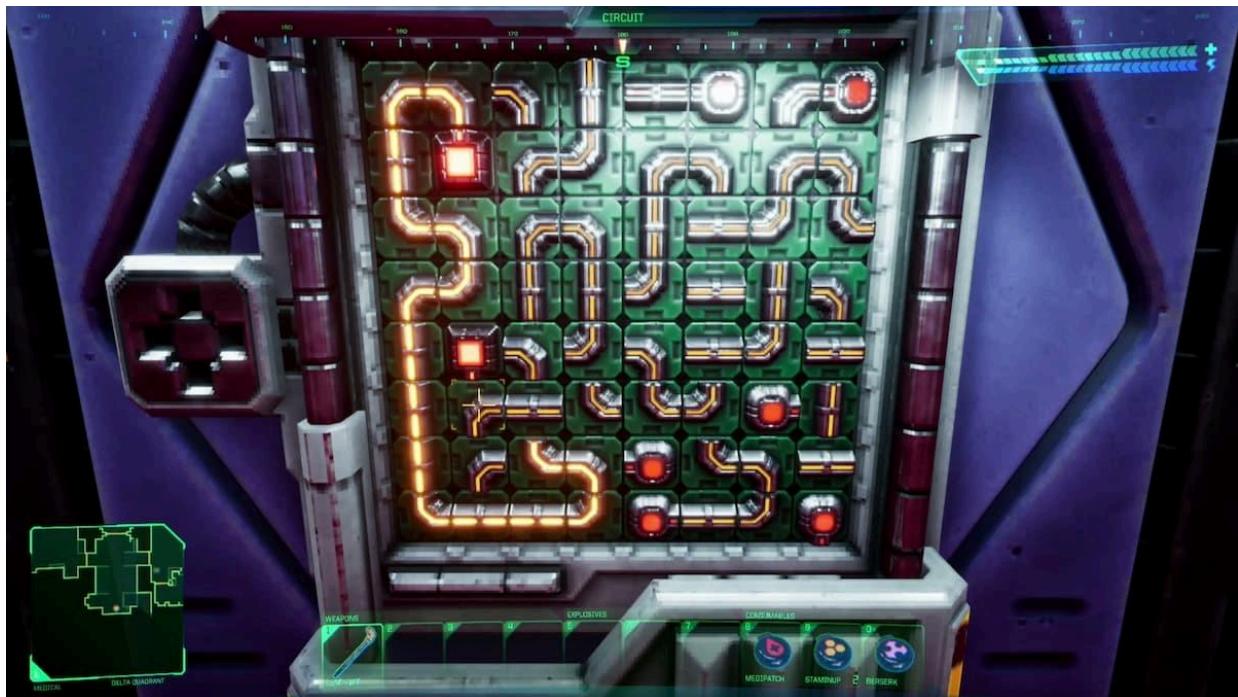
After Puzzle A is solved the player restores main power to the facility and turns the lights back on, as well as the electric field protecting the specimen that is the object of protection during the boss fight.

Puzzle B

Puzzle B will consist of an electricity junction type puzzle, the item optional for this puzzle will be a mirror, where the player will use it to check the position of the mould behind him and choose the appropriate course of action.

Puzzle B will be the player repairing the room's electricity by solving the junction box puzzle, and routing electricity to defend himself as needed by electrifying panels on the ground as needed to deter the mould. However, if the mould is shocked too much, it will mutate and gain immunity to electricity, which would make a significant change to how the boss fight is done.

After the puzzle is solved the player gets access to flares which will be used to fight the mould in the boss fight.



Puzzle B example, from System Shock remake.

The puzzle pieces will be circular and can be rotated to align paths together to allow the power to flow.

Boss Fight

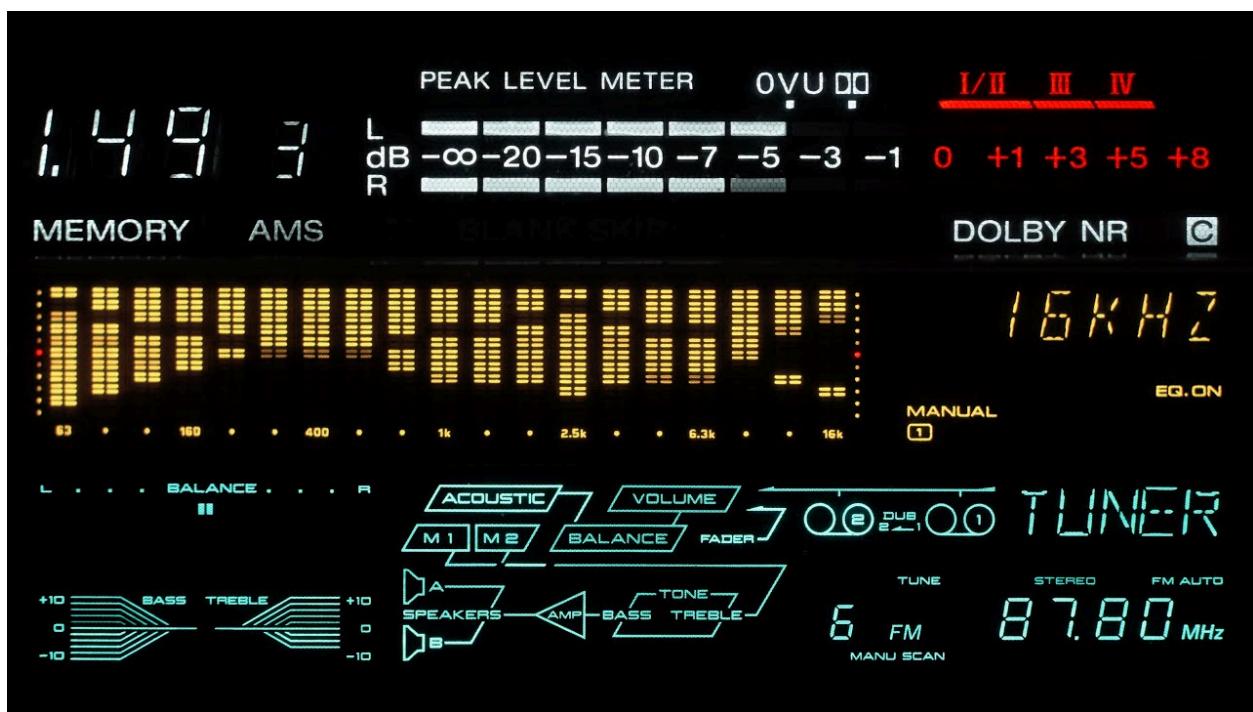
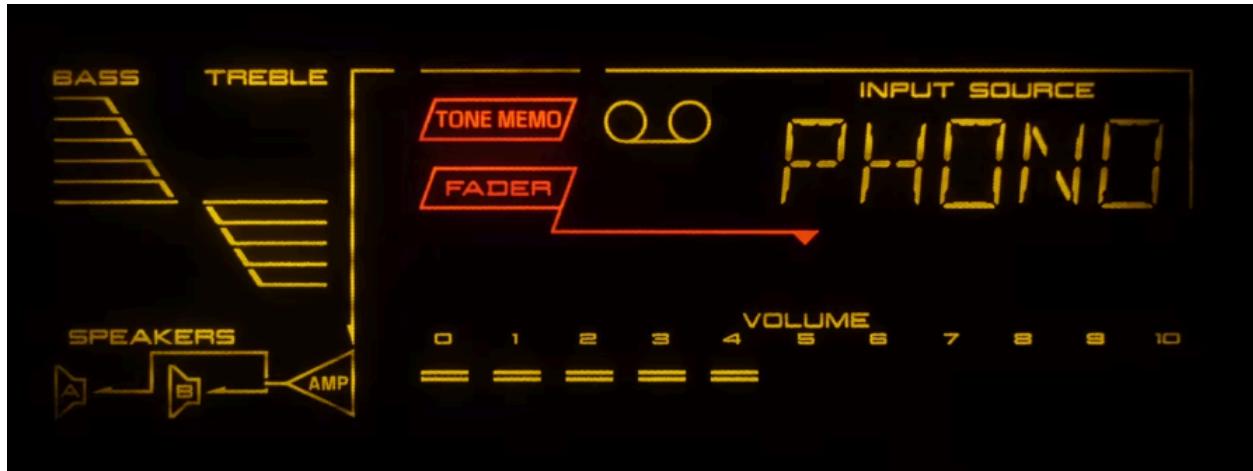
The boss fight will consist of the player trying to protect a cancer cell specimen from the mould for a fixed duration of time. The player will fight mould using the flares, if he got them from puzzle B, and in normal light if he finished puzzle A. If the player finished puzzle A he will also get an electric field to protect the cancer cells from a few mould advances, after which the mould will gain immunity. This benefit is negated if the mould had already become immune to electricity in puzzle B.

If the mould manages to latch onto the containment unit, the player will have a few seconds to drive it away before it consumes the cancer cells leading to ending 2. The player will not be able to drive the mould away unless he has the flares gained from puzzle B.

Game Experience

UI

Following the high-tech theme that the space laboratory inherently creates, the text and UI elements will follow a VFD display design, something that is typically seen on devices such as slightly older radios that have preset “sprites” that light up.



Images: Some examples of VFD displays.

Controls

The control scheme follows the standard first-person control convention. It uses standard movement controls, that being WASD movement/strafing with an ability to sprint, as well as crouching. The game also has an inventory system that can be navigated by using the 1-4 number keys.

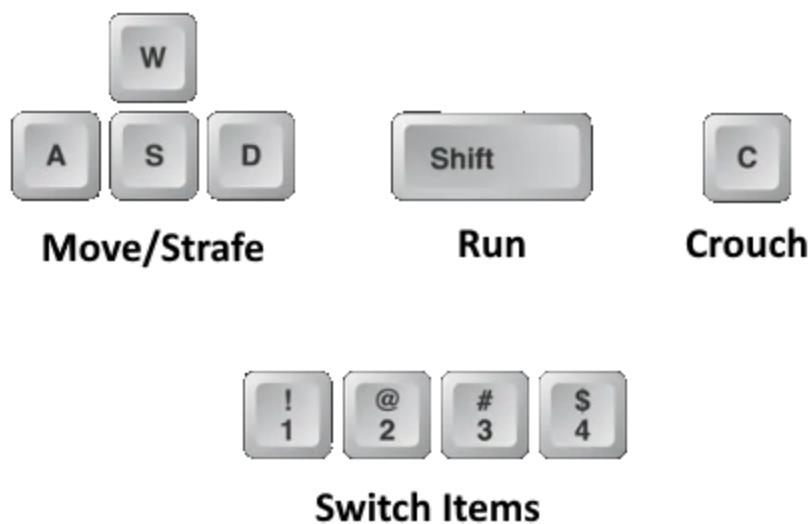


Image: The keyboard control scheme for the game.

Development Timeline

Minimum Viable Product

#	Assignment	Type	Status	Start Date	Notes
1	Work on GDD	Other ▾	In progress ▾	Jan 12, ...	Work on this over time, not all in one go.
2	Make FPS controller	Coding ▾	Finished ▾	Jan 17, ...	
3	Blockout Scene	LD ▾	Finished ▾	Jan 19, ...	
4	Make level assets for prototype	Art ▾	Finished ▾	Jan 25, ...	
5	Make low-energy ambient music tracks	Audio ▾	Cancelled ▾		Follow reference tracks for

#	Assignment	Type	Status	Start Date	Notes
					inspiration
6	Build final level	LD ▾	Finished ▾	Jan 26, ...	
7	XXXX	??? ▾	Not started ▾	Jun 24, ...	
8	XXXX	??? ▾	Not started ▾	Jun 24, ...	
9	XXXX	??? ▾	Not started ▾	Jun 25, ...	
10	XXXX	??? ▾	Not started ▾	Jun 25, ...	
11	XXXX	??? ▾	Not started ▾	Jun 25, ...	
12	XXXX	??? ▾	Not started ▾	Jun 25, ...	
13	XXXX	??? ▾	Not started ▾	Jun 26, ...	
14	XXXX	??? ▾	Not started ▾	Jun 26, ...	
15	XXXX	??? ▾	Not started ▾	Jun 27, ...	
16	XXXX	??? ▾	Not started ▾	Jun 28, ...	
17	XXXX	??? ▾	Not started ▾	Jun 29, ...	
18	XXXX	??? ▾	Not started ▾	Jun 29, ...	

Beyond (If Ahead Of Schedule / Extra Time)

XXXX	??? ▾	Not start... ▾	
XXXX	??? ▾	Not start... ▾	
XXXX	??? ▾	Not start... ▾	