

Project Morphues Dev Log

(This Dev log was one of my first projects, which I feel like I've come along way in my other projects like the Mystical World Solo RPG)

My serious game project is a educational moon simulator game which incorporates a game mechanic where you have to survive with oxygen otherwise you'll lose health and start to die while you go around the moon to discover satellites which will display moon facts as I wanted to keep the game a simulator while in scope for the time I had and a vertical slice to show what the game could look. During the pre-production of this project I did research into the audience and market and then into other games in the sci-fi genre.

During this forum I will go into depth the research for game mechanics and design and the audience/market research of the project and the challenges I faced and how I thought it went during the development cycle of this mini educational moon simulator.



Research

For this part of my forum posts I will be doing extensive research and analysis into the game mechanics I would like to create, the design principles and marketing and audience research including games I researched into that are Sci-fi.

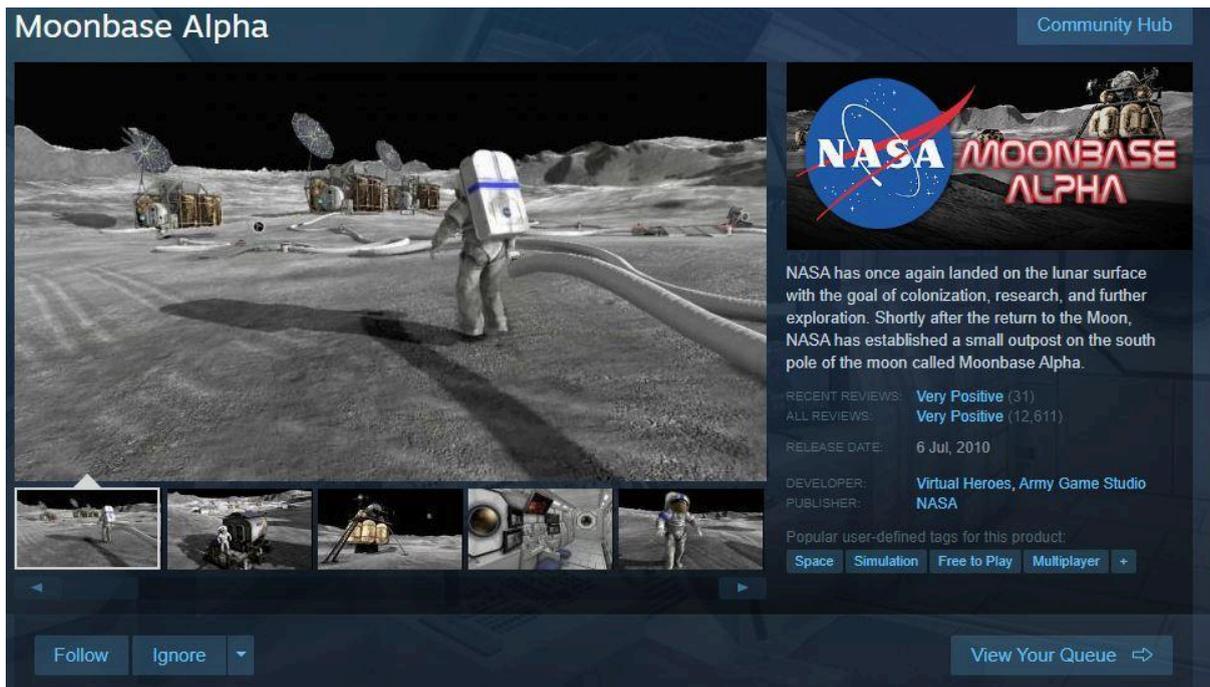
Moon base Alpha

Moonbase Alpha is a simulation moon game created by Nasa which involves researching and exploring the moon which includes building and repairing and surviving, I looked into this game as it was a great example for a moon game to do for my research considering my serious game is a educational moon game which aim to teach children or any particular age about the moon while including game mechanics to keep it interesting. This game would be sort of what I aimed for if my game was to go further after the vertical slice as it includes a lot of cool mechanics like vehicles and repairing your base and building on the moon which was out of scope for my vertical slice however after looking into Moonbase Alpha and giving it a

try, there are some really nice ideas which I believe would work well in my project. This game was also published by Nasa which gives it that authenticity and approval so that while it will still be fun for people to play it has a sense of realism and seriousness to it.

During this I looked into the mechanics they had so I could see what would be in scope and out of scope for my vertical slice and if I could recreate something similar, for my vertical slice I used oxygen and health where the oxygen would slowly go down unless you replenished at an oxygen tank otherwise your health would start to go down, however in Moonbase Alpha the mechanic for oxygen is oxygen total but the different part for this is they show the Oxygen rate alongside it, which isn't something I've incorporated for mine due to the scope I didn't have time to do something like this but if I had longer or went further with this project I would. They also used an EVA suit bar which showed the power/sustainability of it which is something I thought was really cool, and could have been a feature for my serious game, however this is something I would have liked to recreate if it was within scope. The target audience for this game when researching into it is players who have a love for space and the moon, simulating that feeling of what the great astronauts have done, when they first stepped on the moon, this game however is set in the future so it has leniency to allow the players to have fun as this is a multiplayer game, which if my project went further and included more mechanics like the building moon base buildings and repairing oxygen tanks mechanics I would definitely include as it could lead for a fun educational game to play with fellow students or those with general interest in this area. This game chose to do a third person perspective however I choose to go with first person as I believed this to be a far more immersing perspective for the player when learning as it makes you feel like you're there more, seeing it how you would if you were there instead of an observer of sorts.





Research 2

Alien isolation

Alien Isolation is the next game I chose to research which is a survival horror which leans more into fantasy than reality set the the universe from the movies so the whole survival horror aspect while awesome is something I choose to steer away from as I wanted my project to stick to reality and be educational and not fantasy, so the mechanics of sneaking past aliens to survive and using flamethrowers is something I avoided using however the main part that I was researching for and was interested in was how atmospheric it was this is something I wanted to try and capture for this project, as I thought I was done really well with alien isolation with the space suit helmet and the space scenes with it, generally thought it was a really cool atmospheric design choice which was pulled off very well. So my for game I decided to try and have a space helmet on my first person perspective so when you look around you could see part of your helmet, as I don't focus on 3D modelling, I didn't create something visually outstanding however I feel I captured the design choice I wanted to go for from researching into alien isolation.

The audience for Alien isolation from when I was researching I less likely to be interested in my project as mines more realism than fantasy and it steering towards educational values and being serious compared to the fantasy and survival horror of alien isolation. I really liked the particles used in alien isolation when in space, I did try to implement a dust cloud particle which I will show in later posts, however it was carried forward due to the time it took to try and get it to the quality it should be, as Im not the strongest with the particle system however this is something I want to practise and play with more to improve my skills. Bringing back moon base alpha and alien isolation, I would of loved to include a voice/audio recording in a space crackling audio which told you the facts however due to time constraints I wasn't able to, however if i moved further on with the project this is something I would love to implement as it would make it more engaging for the audience and these games when researching tended to go down this route to make it authentic and add to the atmosphere which in my opinion a really cool design solution and choice to making it not stale and more engaging



Alien: Isolation Community Hub



Discover the true meaning of fear in Alien: Isolation, a survival horror set in an atmosphere of constant dread and mortal danger.

RECENT REVIEWS: **Very Positive** (202)
ALL REVIEWS: **Very Positive** (36,459)

RELEASE DATE: 6 Oct, 2014

DEVELOPER: **Creative Assembly, Feral Interacti...** +
PUBLISHER: **SEGA, Feral Interactive (Mac), Fe...** +

Popular user-defined tags for this product:

[Horror](#) [Survival Horror](#) [Sci-fi](#) [Atmospheric](#) [VR](#) +

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Research 3

Starfield

Starfield was another game I chose to research and investigate when planning and developing my serious moon simulator project, Starfield is a RPG by 'bethesda' which is an open world set in space, I decided to research the theming and mechanics of this yet to be released game, as it fits the genre/theming of the game I wish to create. While Starfield where Todd howard talks about whether it is hard or soft sci-fi and distinguishing whether it is or not and as he says "dying in space cold" would be super hard sci-fi and its a video game, however you can still do hard sci-fi while keeping it fun and not super realistic where half the stuff wouldn't be fun due to the mechanics making it to life like such as dying cold in space and calculating the fuel and so one that would be needed to surprise, for this i was watching interview videos with todd howard where he talked on the subject, one is linked below, which I found rather interesting, especially when deciding how punishing or realistic my game was going to be when keeping it fun, it was a wealth of knowledge.

I really liked the way the UI was done in starfield from the early reveal which is subject to change, which

inspired me to make my oxygen and health mechanic UI display in a circle like how it is in Starfield, which gives it a nice modern look for a sci-fi game, however I decided to use the word oxygen in it instead of O2 however this might change, I am considering how young my audience could be if it was used in schools to teach people, however the possibility is there to set a difficulty in terms of educational level. Starfield uses a lot of RPG mechanics and shooting which my game will not use due to scope and that its an educational game about the moon thus these gameplay systems would be vastly different to the experience i am trying to create.



All Games > RPG Games > Bethesda Franchise > Starfield

Starfield Community Hub












Starfield is the first new universe in 25 years from Bethesda Game Studios, the award-winning creators of The Elder Scrolls V: Skyrim and Fallout 4. In this next generation role-playing game set amongst the stars, embark on an epic journey to answer humanity's greatest mystery.

ALL REVIEWS: No user reviews

RELEASE DATE: 6 Sep, 2023

DEVELOPER: Bethesda Game Studios
PUBLISHER: Bethesda Softworks

Popular user-defined tags for this product:

[Open World](#) [RPG](#) [Space](#) [Singleplayer](#) [Sci-fi](#) +

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Market and Audience research

During this part of the forum posts I will be discussing the market and audience research I have done for my serious moon simulator project. I will be delving into the research and how it has effected my project planning and development. Firstly I started with researching why audiences like science fiction so much while my game us mostly non-fiction for educational purposes it could lean slightly into science fiction if we expanded on the project after the vertical slice, leaning into possible planet environments further out from our solar system. During this I found an article on 'Fanthatracks.com' [Cited at the end of the forum post] which goes into saying

“Sci-fi offers an escape from a mundane existence, giving people something interesting and unique to think about – this escapism is something that many people find exciting.”

I found this really intriguing when researching as I would whole heartedly agree with this whether full science fiction or more into the reality of non fiction/educational, Sci-Fi genre games provide the player with a mundane experience but presented in a way that makes the mundane part almost non existent for the audience that loves these games, as they say in the quote it gives people something interesting and unique to think about whether fiction or non fiction, it stimulates the brain so that you get that experience you may not be able to experience in real life due to reasons that may stop you, the part about escapism to me is very real, as someone who loves Sci-fi games for example 'Prey' 'Elite Dangerous' to name a couple and even movies (think 'Interstellar' or 'Stargate SG-1' but for a more grounded approach 'The Martian' which lets the player escape reality and experience what it would be like to delve into space whether being fiction or more non fiction which my project intends to be for educational purposes, it's about making sure the audience achieves what they want to out of the project which is what I intended to do as this research helped me decide on doing a first person perspective and minimal UI so that the user can more easily escape reality while also learning about the moon, as no one wants to play a Sci-fi game where they are drastically unmerged from the experience.

Doing more search I delved into the audience and slightly more into marketing I looked at a 'Martech' article about 'Sci-fi film and video game studios find the way into the mainstream via social media' [Can be found in the citation glossary below].

“However, film and game studios have found that wider audiences have grown increasingly receptive to their content. Using social media analysis, developers, studios and others in the media and entertainment industries can highlight more than just the kinds of people watching their movies or playing their games.

By gathering social intelligence and analyzing the interests, affinities and conversations of people discussing their content, game developers and filmmakers can inform plotlines, marketing strategies and even the technical elements of their products to bring them in line with their audiences’ expectations. Marketers in any industry can do the same by leveraging social data on their target audiences.”

I found this article rather interesting in regards to my research into audience and marketing as it shined a light on the industry with how game developers have managed to find much wider audiences have been more receptive to their content through social media by finding users discussing their games content which can feedback into the marketing team so they know when and what to target which is why I would use social media to push updates and find out the metrics of engagement through social media sites like 'Twitter' 'Youtube' 'Reddit' 'Steam forums' and so on, which can help you engage with your community and manage their expectations through communications and marketing them the product. As this quote says they can highlight more than just "kinds of people" which suggests through the industry they have managed to capture a wider audience while not just the die hard sci-fi fans. This would all be handled with the data they got from social media, which would be public data and would need to follow the social privacy.

“Game developers trying to broaden their product portfolios need to understand how to proceed into PC gaming to develop titles their audiences want to play. Social intelligence tells video game developers precisely what kinds of games generate the most buzz in an increasingly crowded and dynamic space.”

With this quote when researching and investigating marketing and audience's in the sci-fi genre to help with my serious game moon simulator project, they went on to say about how game developers are trying to broaden their product portfolios so they can found out exactly what their audience wants to play and which generates the most hype for them, so this links into my researching as I'm following what they would be doing, making sure my game will fit the audience or expand it beyond its typical audience and how marketing can create social hype to increase the potential of players.

While researching I remembered about a video a from Bellular gaming where they go into looking at the steam metrics for sales, I thought I would bring this up in my research as, if I released this game on steam it would be really good for marketing and find the audience and trends, as Steam provides developers a full on tracking system to seeing the amount of engagement you are getting from players before release and on release such as wish listing, discussions and overall clicks as its another good way to track who your audience are and all the data that comes with it, which can help you with pushing marketing in all avenues like social media and so on, and shows you which audience members you are being discovered by and which you are not. Which will help you figure out if you need to improve or quickly adept your marketing techniques. As for if I was to publish this game on steam or on any platform it would be a really useful way to find the engagement of my project and track how it's doing on the scale and data which means I could steer in the direction where the wind is blowing good and hopefully avoid any fatal mistakes to further market my game and keep track of the audiences and its trends.

Cameron, B. (2022). *Why Is Science Fiction Such A Popular Genre With Fans?* [online] Fantha Tracks. Available at: <https://www.fanthatracks.com/blogs/why-is-science-fiction-such-a-popular-genre-with-fans/#:~:text=Sci-fi offers an escape> [Accessed 26 Mar. 2023].

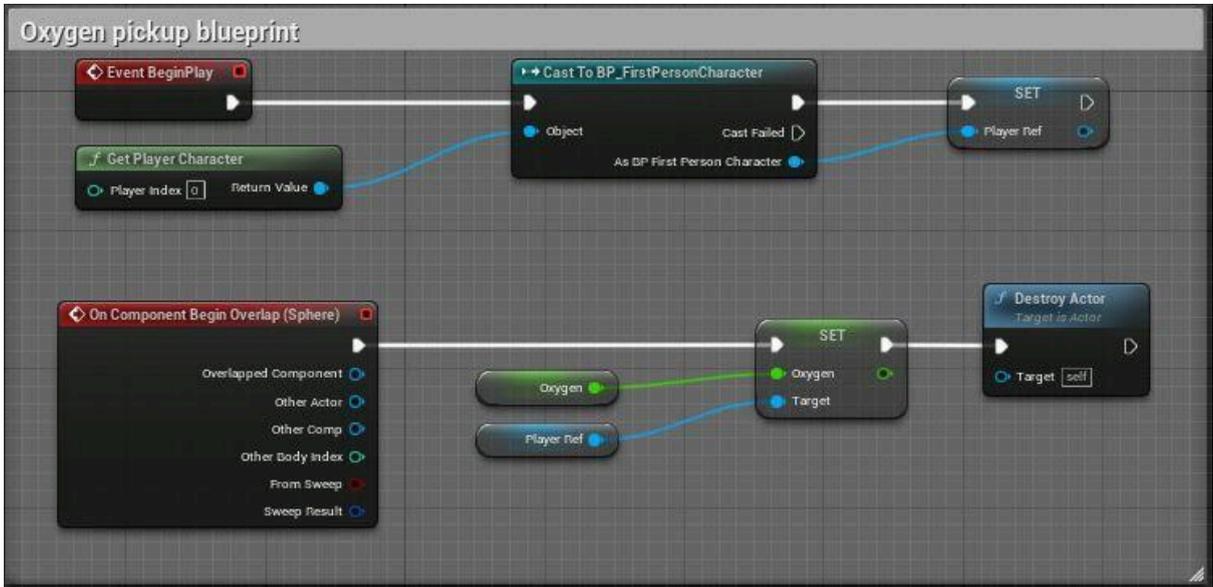
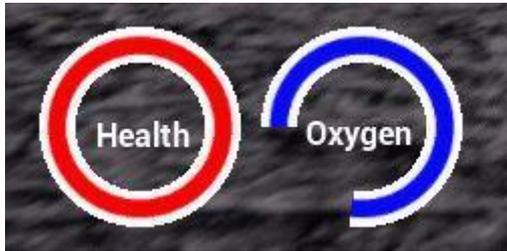
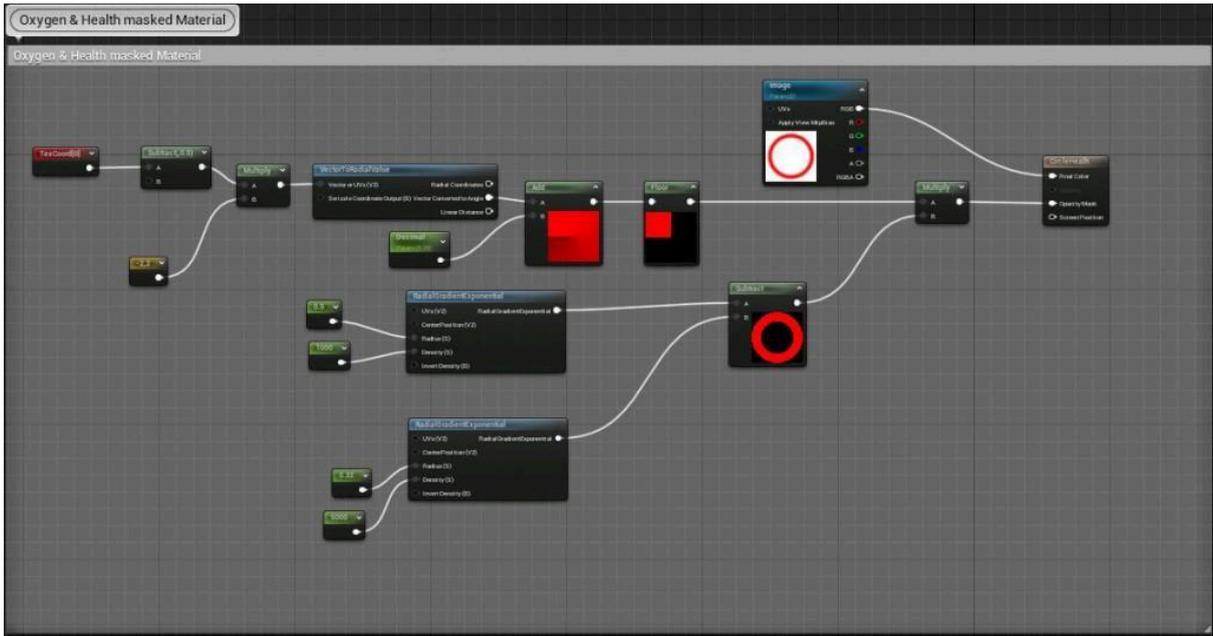
MarTech. (2016). *Sci-fi film and video game studios find the way into the mainstream via social media.* [online] Available at: <https://martech.org/social-media-shows-sci-fi-video-game-studios-way-mainstream/>.

www.youtube.com. (n.d.). *We Released Our First Game On Steam: Real Stats Revealed.* [

Technical blueprint Development documentation #1

During this part of the forum posts I will be discussing the development of my project going into the oxygen mask I created, oxygen warning blueprint, oxygen pickup, oxygen timer and facts manager

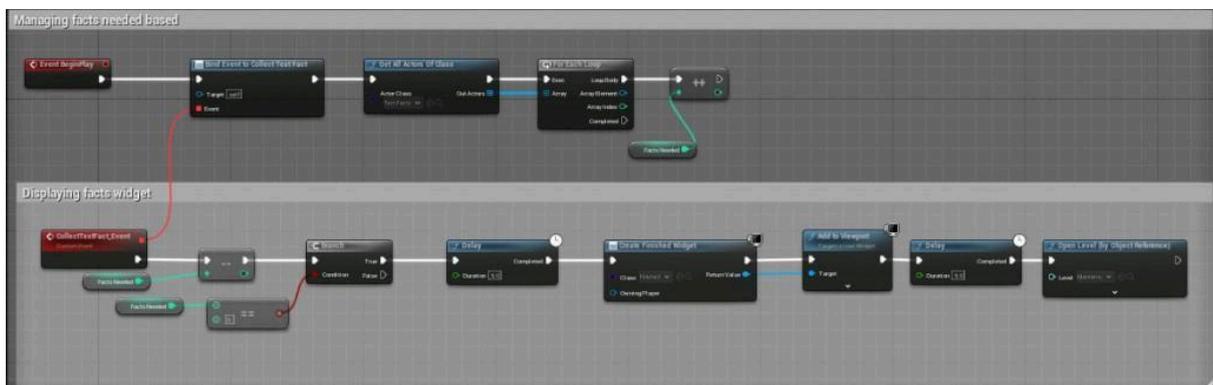
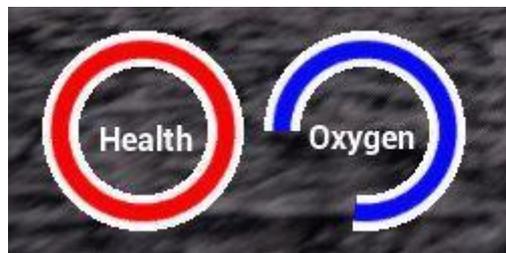
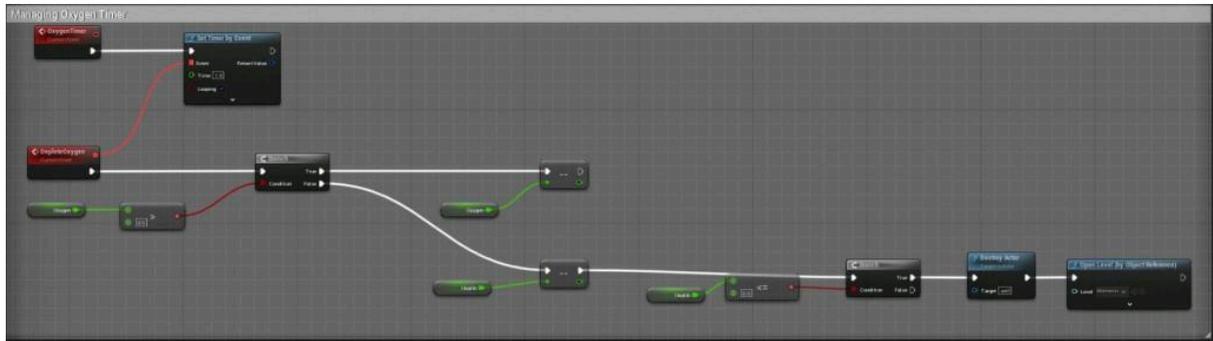
This is my oxygen and health masked material which was used by importing a Circle image I made in photoshop 2023 and exported to the unreal engine 5 engine, for this I inserted the image para ID and plugged it into the base colour then from the opacity mask I multiplied it from B into a subtract node then into a radial gradient experimental and added by 0.5 and 1000 from the a AND THEN 0.22 and 5000 from the B, from the A i then got the floor and plugged it into an add node where from C i plugged it into the decimal node and then on A i got the vector radial value and multiplied it by A into a subtract (0.5) and then a text coord, from B i did -2,2.



This is my oxygen pick up blueprint which is on the event begin play blueprint, from the beginplay execute pin I casted to the player character by getting the player character reference then set the player character reference, after this I had an on component begin overlap event which set the oxygen value for the player back to it's max which is 100 and then the player references the target which on use destroyed the actor

Below is my oxygen timer event which from the execute pin goes into the set timer by event and the time is set to tick down 1 second each time, from the event i go into a custom event called deplete oxygen

where i then add a branch node which condition is greater than which is plugged into my oxygen float, on the true it will subtract by 1 which is plugged into the oxygen node and then if false it means the player has no oxygen so it will start to deplete the players health by subtracting by 1 into the health float and then go into a branch with the condition being if the float health is lower then 0 it will then be true and destroy the actor (kill the player)

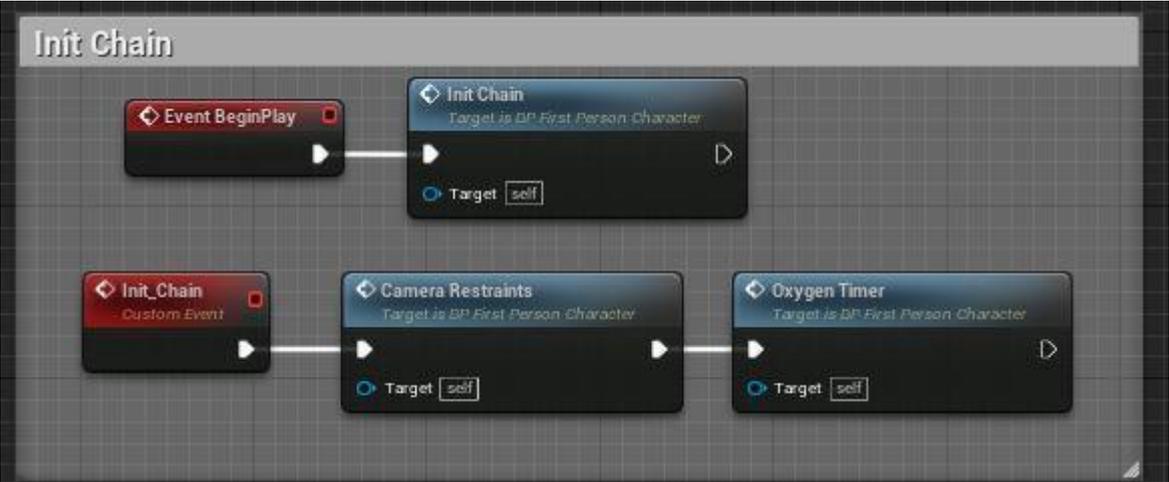


The blueprint above is my facts manager actor blueprint which on begin play will bind event to collect text face which from the execute pin gets all actors of class then text facts which will for each loop from the execute and array pin and then ++ the facts needed so it will then show how many facts are needed depending on how many facts are in the game world.

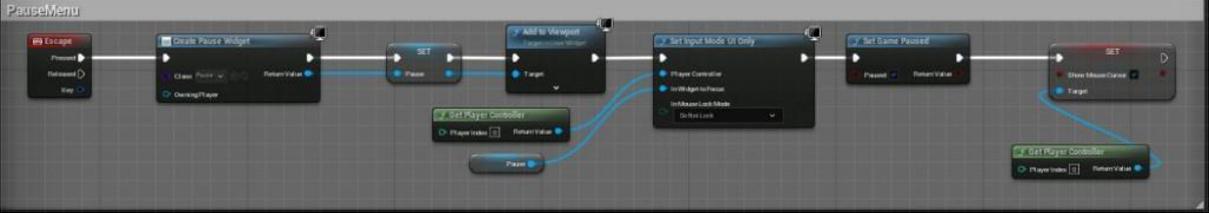
Now going back to the bind event node from the event pin I create a custom event called Collect Text fact event which will go into a subtract 1 node which is plugged into facts needed integer and then goes into a branch which the condition is is facts needed equals 0 then after a delay of 5 seconds it will create widget finished and add it to the viewport and after another delay of 5 seconds will reopen the mainmenu widget.



This is my oxygen warning blueprint so that when the player overlaps with the box component on the boundaries of the map it will cast to player character for the reference then set their oxygen to 0 which after it will create widget which is my blur widget which will blur the screen to help create a sense of danger for the player, and set it's visibility to true and only do it once



This my init chain blueprint which from begin play calls the custom event init chain which will hold all of my init chains for efficiency and easy workflow, such as camera restraints and oxygen timer.

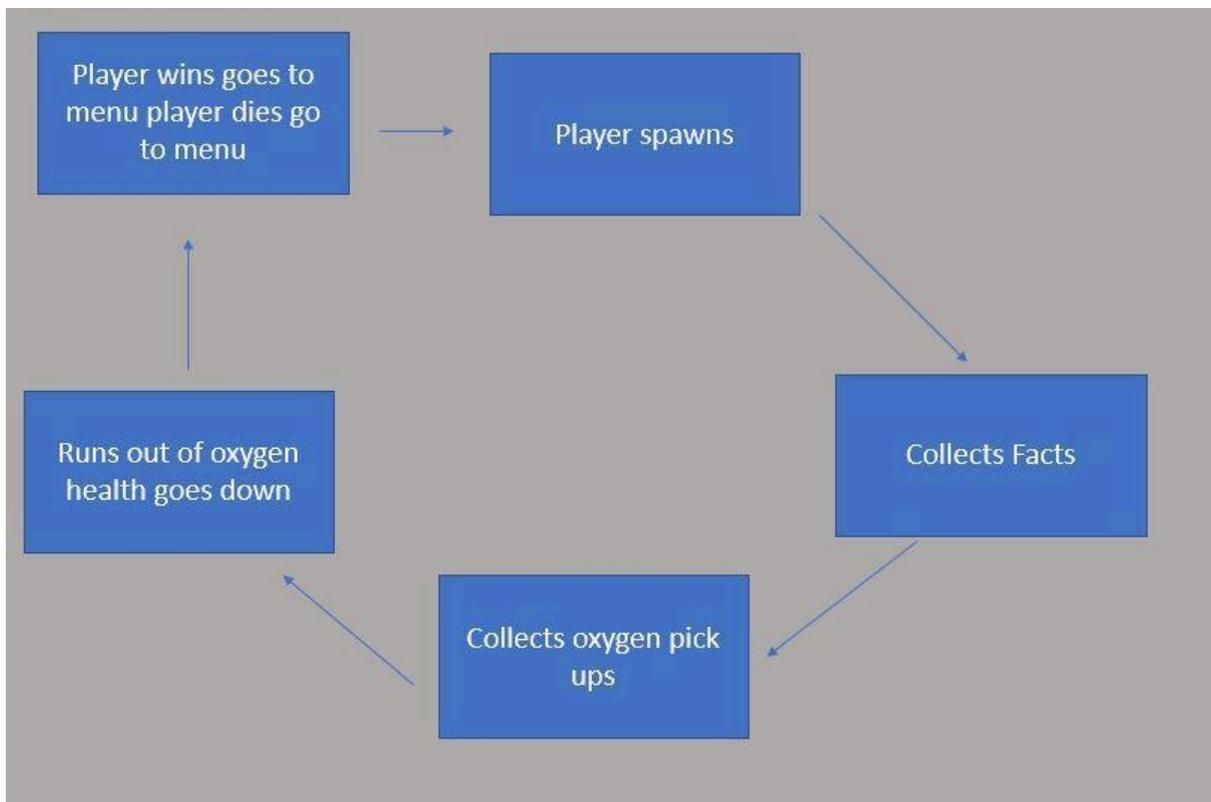


This is my blueprint for my pause menu so when you press 'escape' on the keyboard it will create the pause widget and set pause and add to viewport, which will go to set input mode UI only and the plug in the get player controller and pause widget reference, from there it will set game paused to true and then set show mouse cursor to true and get the player controller

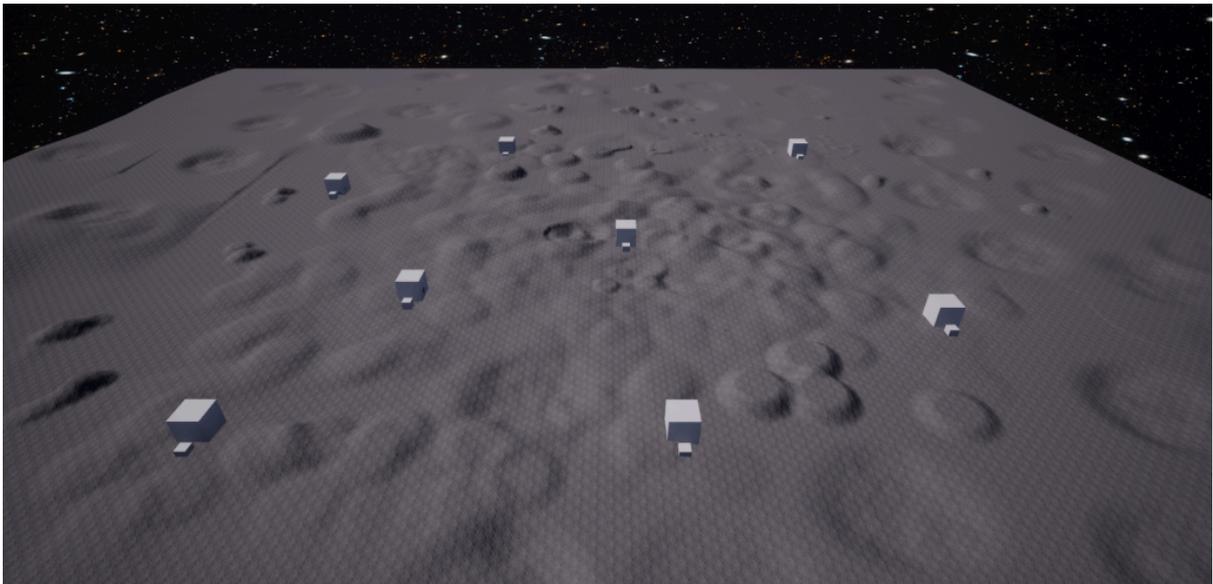
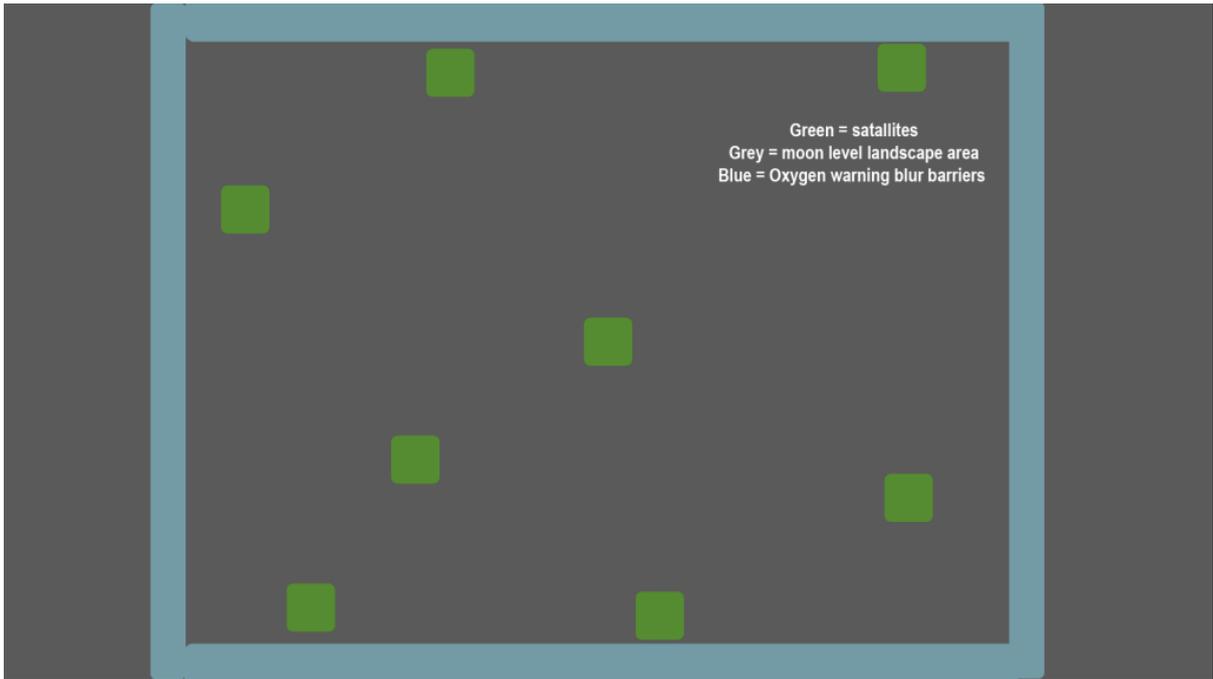
Design Development documentation #2

These are some of the designs I had for my moon simulator, ultimately there wasn't too much to go in terms of design as it was a vertical slice simulator which the mechanics themselves aren't super complex and isn't too many overwhelming mechanics considering this is meant to be an educational simulator for children wanting to learn about the moon.

This is my gameplay loop design for my moon simulator, as it's a simulator the mechanics were barebone as not much is needed however as it's a vertical slice this is the gameplay loop of the vertical slice, if the game went further there would be a lot more mechanics to add to the gameplay loop such as repairing your moon base and so on. The player spawns, then you collect facts, restore oxygen with pick ups, if you run out of oxygen you start to tick down health, if you collect all facts you win and go to the menu if you die you go back to the menu.



Below is a design of how I want my level designed, I made a 2D photo shop annotated design of everything that's in the level, the level landscape and the oxygen warning areas of the map, as this is a simulator there isn't a ton of items that need to be included in my 2D design and I also created blockouts of where I wanted my satellites to be in my project using UE5 standard cubes



Trello Development documentation #3

I didn't have access to Jira, so I used trello as a substitute to track the development of my games progress, below are some screenshots of how I had it layed out. Trello was fine to use however after using Jira in my collaborative projects I find it is far more useful in terms of organisations and features and I would of loved to have used it if I had access to it! I have an example from early on in development when I had certain tasks completed, some tasks i was working on then some tasks to do which I hadn't started yet, then a completed done trello image and an example description inside.



To Do



Create health and oxygen widget art in photoshop

+ Add a card



Doing



Add satalittes meshes



Create an oxygen pickup



Warning zone actor



+ Add a card



Done



Set up player character



Set up facts manager



Set up main menu and game game modes



Create the text facts actor



Create the turn back actor

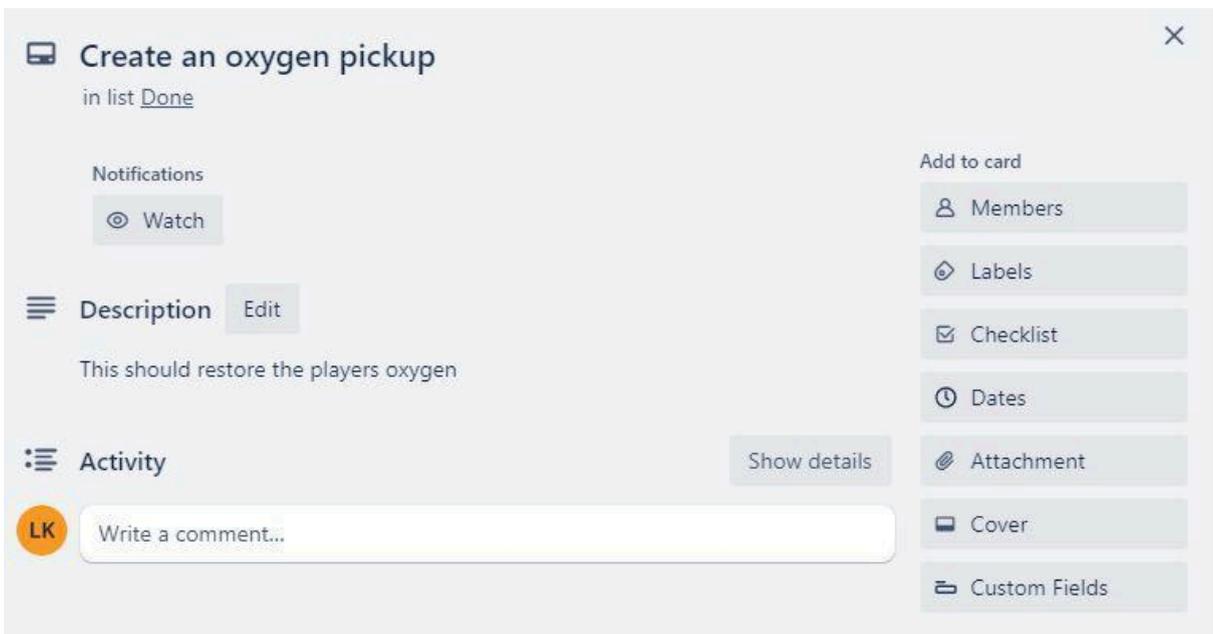
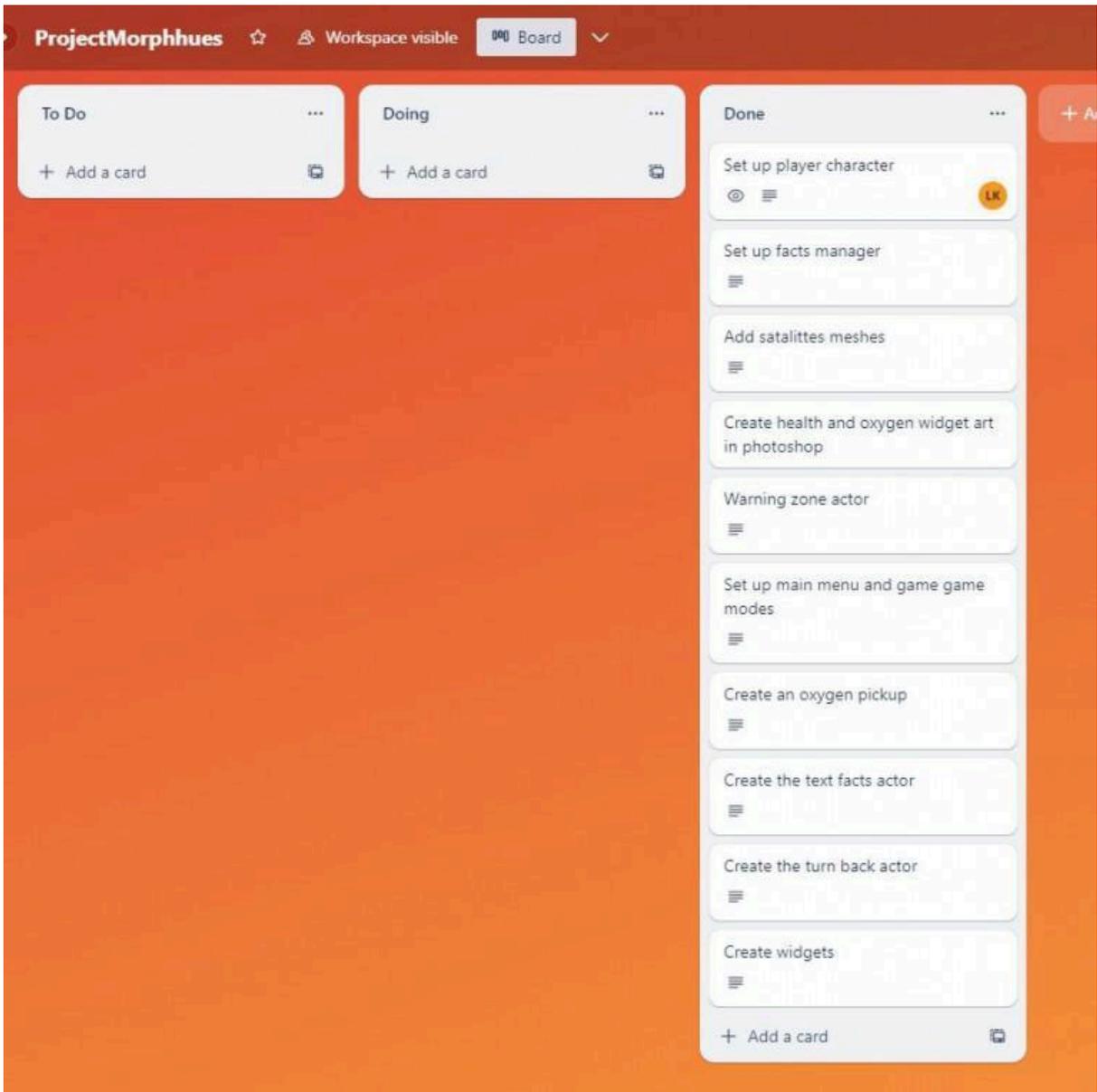


Create widgets



+ Add a card





Pitch deck Development documentation #4

Below is a link to my pitchdeck I have created for my serious project game called Project Morpheus

[Pitchdeck Project Morpheus.pptx](#)

Trailer & itch.io link Development documentation #5

<https://leonkershaw.itch.io/project-morpheus>

Assets used Development documentation #6

Here are the assets I didn't make which I got through a variety of assets from website which I disclaim I did not make.

Oxygen

canister - <https://www.turbosquid.com/3d-models/3d-model-oxygen-cylinder-1637893>

Nasa Rader model

- <https://solarsystem.nasa.gov/resources/2394/deep-space-network-70-meter-antenna-3d-model/>

Moon floor surface - <https://www.blenderkit.com/get-blenderkit/4a705ae3-8db3-407a-bacc-363191c17a37/>