SKyne

Game Design Document

Last Modified: 2/12/17

1. Game Overview

1.1. Game Concept

Skyne is a game that focuses on exploration coupled with spatial awareness. The game will require the player to understand how the world is interconnected in order to get to where they wish to go. The game world is one big maze divided into 3 layers stacked on top of each other. A map will reveal the rooms that the player has been and the landmarks that they have discovered. However, the map will not show obstructions or their location. Instead, they will have to use the landmarks and their compass for reference. On top of figuring out where to go, player will face enemies of varying types and difficulty that will increase in numbers as the player reaches one of their objectives. At the end of of each sector there is a boss waiting for the player.

1.2. Genre

Skyne is an action adventure game that focuses on solving environmental puzzles that test the player's spatial intelligence. Our goal is to encourage exploration and discovery by keeping the player guessing as to what they will find next. The dynamic of the game will switch up from time to time between fast paced action and methodical puzzle solving segments.

1.3. Target Audience

Based on the standards of the Entertainment Software Rating Board, this game is meant to be rated E for every one of all ages. The core demographic is from ages 8 to 20 years old.

Name	Roberto
Age	9
Bio	Roberto is currently interested in soccer and going out with friends to play. Pastimes with friends include: movies, video games, soccer, and lunch. Roberto and his friends occasionally make references to games to celebrate a goal. They also like to share glitches, funny moments or cool moments that happen while they played.

How many hours do you play video games per week?	4 hours
What kind of games do you play?	Shooter games & Casual games for Mobile
Do you like puzzle games?	Yes
If so, What do you like about them? If not, What would make you like them?	Prefers puzzles that are part of the game and not the whole game. Motivated to explore the area for clues if the puzzle is fun enough. When the riddles / clues are not too abstract.

Name	Adorno
Age	20
Bio	The supposed "hardcore" gamer that seems to be an expert at any fighter game that he gets his hands on. He has a varied taste in games and has a love for strange and complicated narratives. It makes him think inbetween the lines and figure out what is implied as if it were a puzzle.
How many hours do you play video games per week?	10
What kind of games do you play?	Graphic Novels, Puzzlers, Fighter, First Person Shooters
Do you like puzzle games?	Yes
If so, What do you like about them? If not, What would make you like them?	He likes puzzles that are complex in the sense that the clues are scattered everywhere and you have to piece it together like a detective.

Name	Daisy
Age	18
Bio	She likes games that require her to be more involved. Idle point and click games will not do it for her. She also likes to see some

	progress being done narrative-wise as it gives her a clear objective to work towards.
How many hours do you play video games per week?	4
What kind of games do you play?	3D platformers, Racing Games, Fighter Games
Do you like puzzle games?	No
If so, What do you like about them? If not, What would make you like them?	Not alot happens in those kind of games so she gets bored fairly quickly.

Name	Margarett
Age	14
Bio	Margarett is more into games that let her explore a new world or a different interpretation of the world. Artsy games are her passion as she believes that those are the most who tend to be boldest.
How many hours do you play video games per week?	12
What kind of games do you play?	Educational Games, 2D platformers, Open-World Adventure
Do you like puzzle games?	Yes
If so, What do you like about them? If not, What would make you like them?	She likes them because they are a whole different pace but still tense if you play the right game. Some puzzles are timed and so she likes the rush of solving things quickly by coming up odd solutions.

1.4. Game Flow Summary

At the beginning of the game, players will be introduced to the core mechanics of the game in a tutorial segment. Once they get through that initial segment, the world will open up to a three layered maze and the player will be

free to explore however they please in search of three keys. The player will solve puzzles and engage in combat to switch up the dynamic of play. When the player finds all the keys they will be able to unlock a final door and retrieve an artifact. However, removing the artifact will cause the ruins to break down and so the player must make their way to the exit before time runs out.

1.5. Look and Feel

In terms of looks, the game will be cartoonish in nature to appeal to our target demographic. Further along the lines of cartoon-ish, the game will be low poly to ease the creation of assets. Textures will be simple yet elegant.

There will always be enough light for the player to see where they are going. While indoors, anything past the player's field of view will be darkened but never pitch black. Shadows will be an off color with the use of global illumination. All the objects will be softly cell-shaded with rim lighting to solidify the cartoonish look.

The feel of the game is suppose to be calm for the most part as players make sense of and take in the area around them. The game picks up whenever the player happens to encounter an enemy. The targeted feel is comparable to the typical explorer/treasure hunter, chasing after something but not aware of the danger at every corner.

2. Gameplay and Mechanics

2.1. Gameplay

2.1.1. Game Progression

Players will have the freedom to choose which direction they want to go within the maze. Because of this, there is no correct order for how the game can be completed. Part of the game is to make sense of the area and use clues to get closer to the goal.

These clues include the enemy location, lighting, and environmental cues. The more packed and area is with enemies the closer the player is to one of the three key rooms. The colored lighting of a sector will become more intense the

closer the player gets to the key room. Lastly, environmental cues such as implied lines, hidden arrows, and beams of natural light will serve to guide the player from time to time.

Landmarks will be memorable rooms that the player can use for reference. In addition they contain murals somewhere in the room that will give the player insight into the backstory of the world. (For more information see section 3.2.2)

The player will have access to a map that will keep track of the rooms that they have been in but not their location on the map. In addition they will have a compass so that they can keep track of where they are located in relation to a landmark.

2.1.2. Mission/challenge Structure

The game will contain three keys that the player must retrieve in order to complete the game. Each sector is safeguarded by a group of enemies plus a Guardian (Boss). The treasure rooms can be approached from a variety of directions. The difficulty and length of the paths will vary.

2.1.3. Objectives

Throughout the game players will be searching for 3 Keys. Each key has a distinct color and sector. Yellow for sector 2, Blue for sector 3 and Red for sector 4. These 3 keys are contained in 4 special rooms safeguarded by their respective bosses.

2.1.4. Play Flow

The order in which the game flows is as follows: Training Sector > Hub > General Sector / Mini Sector / Landmarks / Sector / Mob room / Save room > Escape. Notice that once the player is done with the training sector, the rest of the order is unclear. This is because the player has the freedom to choose where they will go in the ruins and so they may stumble upon any of the other components in any order. However, as the game progresses, the player will find landmarks that will be recorded on their map. This act will bring the flow of play into focus as the player uses the landmarks and the compass to guide themselves through the maze. The landmarks will also encourage players to explore since they will have the landmarks

as reference points in case they get lost. Once all 3 keys have been collected, the player will only have a couple of minutes to escape before the ruins collapse.

2.2. Mechanics

List of Mechanics / Scripts	Description
3rd Person Camera	The camera that will be following the behind the player character at a 120 degree angle.
Character Movement	The movement controls for the player character.
Character Shooting	Shooting functionality based on the center of the screen.
Enemy AI	Thought process, movement, aiming and shooting of enemy AI.
Player & Enemy Health Functionality	Health functionality ranging from 0 to 100.
Invincibility Frames	Frames where the player nor the enemy can be further damaged until it wears off.
Slow Motion Mode	Mid-air ability that allows the player to aim gun mid air without worrying about gravity.
Over the shoulder Aim	Precision feature in case the 3rd person perspective is not enough.
Boss AI	Thought process of the boss AI.
Map Functionality	Map that keeps track of the player's progress through the level.
Pick Up Item Functionality	Pick up item once player has pressed the interact button.
Pause Menu Pop Up	Opens menu & settings.
Game World Loading	Load in rooms before the player goes into them.

|	
Quit Game	Terminates the game.
Save Game Functionality	Saves player location, rooms discovered and keys obtained.
Load Game Functionality	Sets the player's last location, the rooms they discovered and the keys they have obtained.
Music & SFX Volume Slider	Manipulate volume for Music and SFX in the game.
Dashing	Dash in the direction the player is inputting.
Double Jump	Allows the player jump a second time in mid-air.
Wall Jump	Allows the player to jump on to opposing walls that are close enough.
Rapid Fire Upgrade	Makes the players shot faster but weaker.
Charge Shot Upgrade	The players shot becomes a power blast but it takes time to charge.
Wide Shot Upgrade	A shotgun like shot, short ranged but powerful.
"Leapfrog" Ability	Allows the player to jump on enemies back for an extra jump boost.
Sight Impairment Functionality	Fogs the players field of view so they can't see scenes that are still being loaded.
Game Controller Compatibility	Compatibility with PS4 controllers and XBoxOne controllers
PC Compatibility	Game is playable on PC.

2.2.1. Physics

The physics of the game are closer to real life with a few key exceptions. Firstly there will be some leniency with the amount of gravity that pushes down

the player character so that they have a high enough jump. There will be easing at the end of the jump to create a believable arc.

2.2.2. Movement in the game

The player will be able to move in a omni-directional fashion and only at one speed. The speed of the player will be a moderate jog and if the player unlocks the dashing upgrade they will be able to sprint while on the ground. Players will be able to find upgrades hidden throughout the map that leverage movement or weapon abilities.

Movement Upgrades	Description
Double Jump	One such upgrade is a double jump upgrade that can be used to traverse levels faster and also use the slow motion mode without the need of high ground.
Wall Jump	There will be times where players will come across what seems to be a dead end with a narrow chute above the dead end. Players will need the Wall Jumping upgrade to go up these corridors.
Dash	There are some cases where slowing down time will not save the player from getting hurt mid-air. In these cases the player could use the dashing upgrade to quickly dash out of the way. The dashing upgrade gives a momentary burst of speed in the direction that the player is aiming.
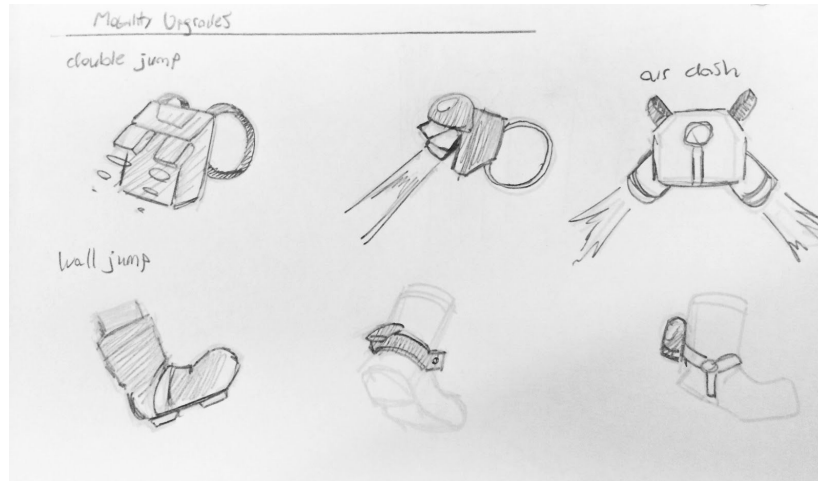
Movement upgrades concept art.

Whenever the player encounters a tough enemy that they can't seem to damage from the front side, they can wait for an opening and jump on the enemy's back. The player can then use this opportunity to trigger their slow motion mode and dispatch the troublesome enemy.

The slow motion mode is a special way that players can dispatch enemies. Whenever the character is in mid air, the player has the option to trigger slow motion mode, which will cause the character, the enemies, and the enemy bullets to slow down. The slow motion is limited by a stamina bar that decreases so long as the player remains in slow mo mode. The character will be slightly faster than the enemies and enemy bullets so that the player has the advantage.

2.2.3. Objects

All interactions with objects that are not enemies or an obstacle will be handled with the interaction button. Players will know if they can interact with a particular object that they are colliding with via a prompt that will read "Press "E" to interact with …".

Objects	Description
Upgrades	Upgrades take the form of junk that the player finds in certain rooms. This junk is located somewhere in the hidden room and it has a faint glow to tell the player that it can be interacted with.

Keys	3 keys that are necessary to progress the game.
Doors	On occasion players will encounter doors that break up the sections of the map.
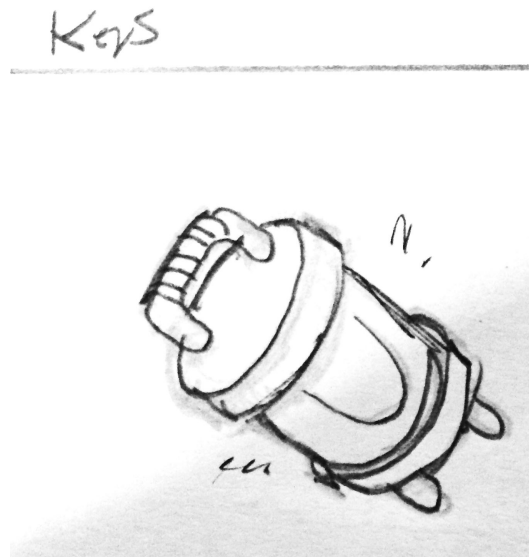
Keys

2.2.4. Actions

When keys are picked up, they will appear on the player's backpack to show their progress.

Once an upgrade is obtained, the player will be able to use the corresponding ability. Only one weapon upgrade can be active at a time while movement upgrades will be active from the moment they are acquired till the end of the game.

To prepare the player for the boss battle on sector 3, players will encounter a special elevator platform that they can shoot in order to activate them. The platform will have a weak point in its center that will toggle the elevators position when shot.

2.2.5. Combat

The combat of the game consists mainly of gunfire exchange between the player and the enemies. The center of the camera will always be the destination of

the player's bullets. The player can move the mouse around to aim while standing or while they are moving. Players need to keep a close eye on their gun as firing rapidly will cause the gun to overheat. When the gun overheats, the player will have to wait a few seconds before they can shoot again.

rapid = propeller
Charge = Sails
Wide = color change
Overheat = smoking
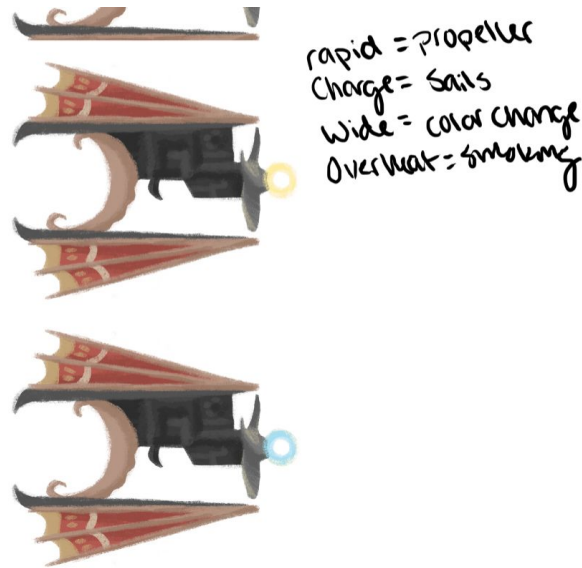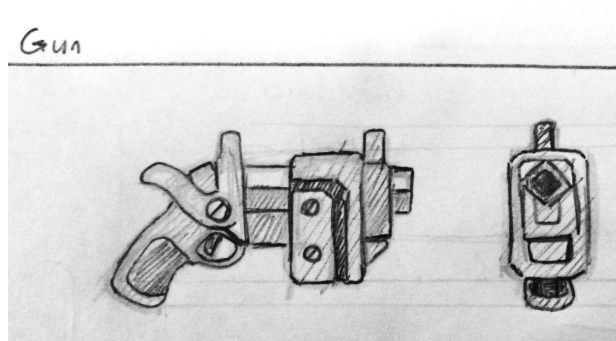
Gun A concept art.

Gun B concept art.

Players have two ways to shoot, they can either shoot freely with 3rd person perspective or they can be more precise by aiming. Whenever the player needs a more precise shot they can hold the aim button to change cameras from the 3rd person perspective to an over the shoulder perspective. There will be a zoom-in transition when the aim is triggered and a zoom-out transition when the player releases the aim button.

To promote the use of the slow motion ability over just regular combat, enemies will have their weak point at the top of their head. On a ground level players will not be able to shoot the weak point so they need a way to get above the enemy. Players can use ledges to jump over enemies or they can use upgrades.

Upgrades such as the double jump and wall jump are meant to help the player use the slow mo mode when there is no high ground in the room.

The enemies have a weak points that causes them to receive full damage from the player's shot. However, if the player shoots anywhere else beside the weak point then the damage the enemy receives is divided. Enemy health and damage towards the player vary depending on the type of enemy. (See Section 7 for the enemies health and damage output.)

Players can also unlock weapon upgrades to deal extra damage. These weapon upgrades can be acquired by obtaining special parts located in certain rooms that are hidden. Once acquired, the character will automatically equip the new upgrade. When in combat, the player can switch through the gun upgrades quickly to fit their needs. (See section 5 for more information on how to switch between gun types. See section 4 for more information on upgrade location.)

Both the player and the enemy will have invincibility frames when hit, indicated by rapid flashing of the model. Invincibility frames are crucial to the success of the combat system so that the player can not spam the firing button to dispatch enemies as if they were nothing and vise versa. When hit, the player or the enemy will flicker and their damage input will be disabled.

Gun Types	**Description**
Normal Shot	The initial gun is a fair balance of strength, and speed. **Frequency: 1 second** **Damage Output: 10**
Rapid Shot	The rapid shot upgrade will allow the player to shoot 4 bullets in a quick burst. These bullets are much faster than standard bullets but they are weaker. **Frequency: 0.5 second** **Damage Output : 5**
Wide Shot	Wide shot works like a shotgun, short ranged but very strong. This gun upgrade has the ability to deal lots of damage even if the player is not targeting the weak point. Downside is

	that, because it is short ranged, it is not very practical to shoot the weak points at the top of the enemy, the player will most likely miss. **Frequency: 1.5 second** **Damage Output : 30**
Charge Shot	A powerful move that takes a while to release. This shot has 2 stages, charging and ready. The player must hold down the shoot button for 3 seconds to reach the Ready stage. Once ready, the player can release the charge shot and deliver heavy damage with a large energy bullet. If the player releases the shoot button before it is ready, the charge will be cancelled out. This charge shot is strong enough to destroy any common enemy with one hit with the exception of the Fort enemy who can nullify the shot with its shield or take two full charges. Boss enemies take a fair amount of damage but they are still difficult. **Frequency: 3 seconds** **Damage Output : 110**
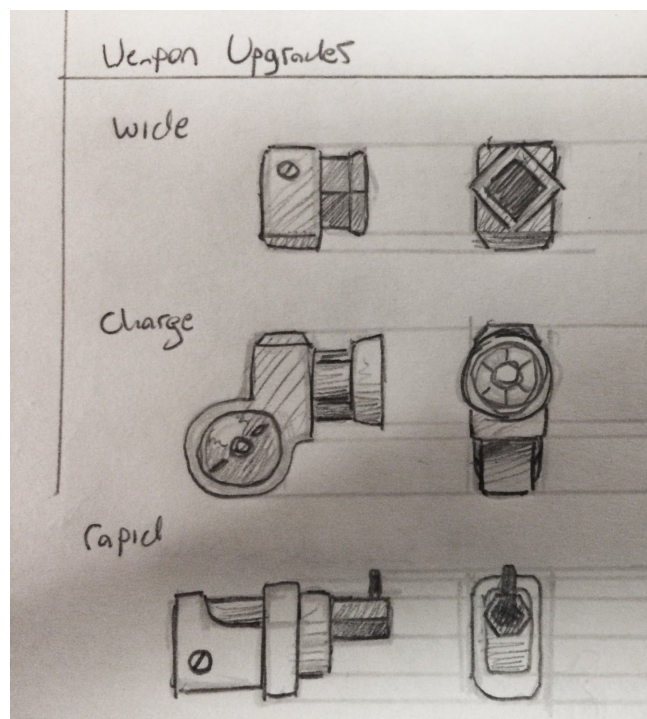
2.2.6. Screenflow
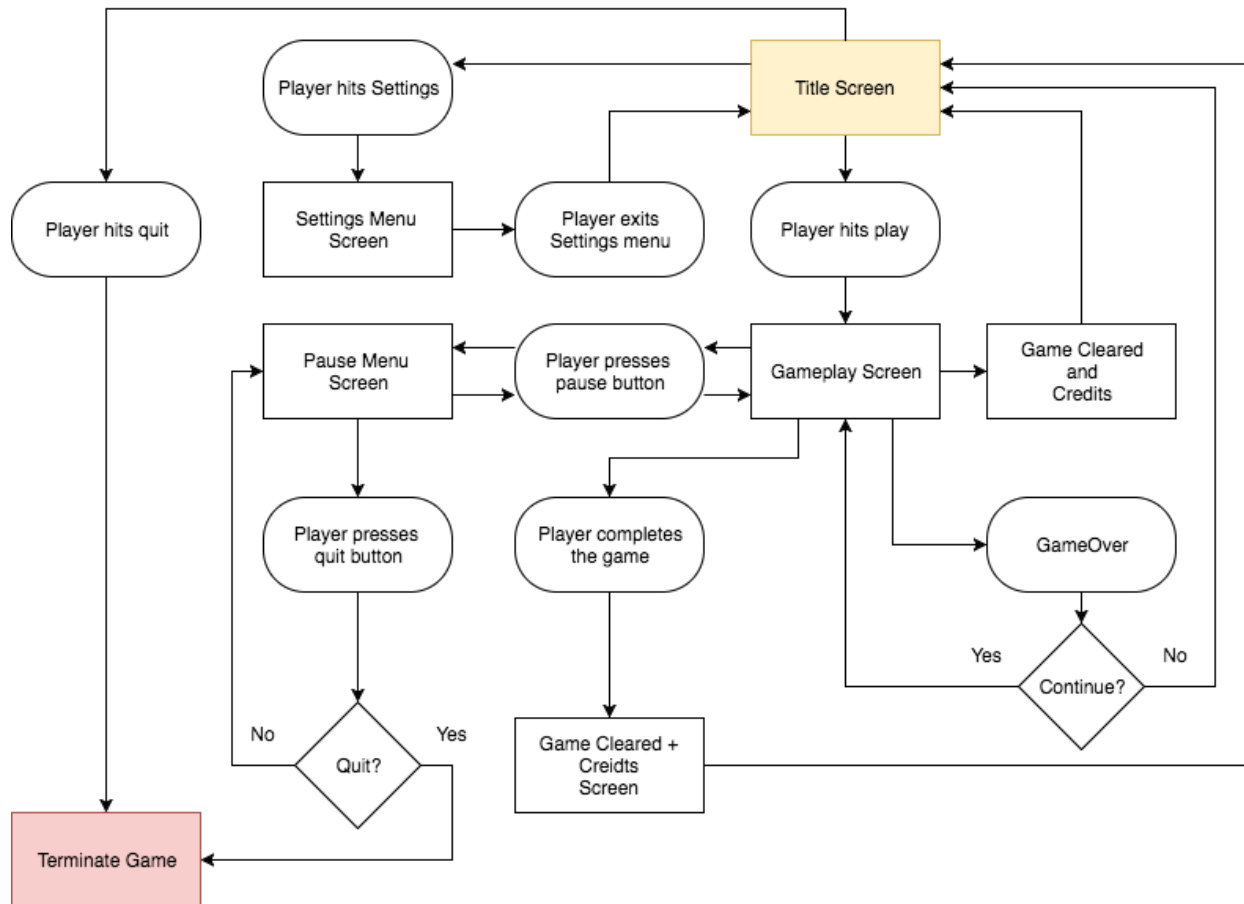
Screen	Description
Main Menu	In the main menu, players will be presented with three choices: Play, Settings, and Quit. The play button begins the game and loads the player's last save file (if there is one). The quit button terminates the game. Fade transitions will make it more polished.
Settings	In settings, the player can tweak the volume of the game.

Gameplay	This is the screen that presents the player with the game. If the player loses then they will notice an overlay saying "Gameover". They will then be prompted if they wish to continue playing or not. If yes, then they will be taken back to the last save point they used. If not, then the game will end.
Pause	There will be two vertical sliders that'll represent music and sfx volume respectively. Players may use these sliders to change the output volume as they see fit, ranging from 0% to 100%. Lastly there is the resume and quit button. The resume button will close the pause menu screen and allow the player to continue playing; while the quit button can be used to exit the game whenever the player wants.
Game Cleared + Credits	A series of still images that will show what happens to Amelia after the game is complete. On the side the

2.3. Game Options

In the pause menu, the player has the option to increase and decrease volume for the music and sound effects present in the game. Note that the default settings for music volume will be 70% and the SFX will be 50%.

2.4. Replaying and Saving

Players will be able to save their progress with special glowing spots located in save rooms. When the player interacts with these spots, the character will execute an animation that shows the character is charting out a map. The rooms in which these save points are located are small and they do not contain any enemies. It is a haven for the player to take a break and put down the controller.

The save will include the player's last location, the keys that they have collected, the upgrades that they have found, and the rooms that they have discovered. Notice that this set does not include the enemies that have been defeated, because they will be respawning whenever the game reloads.

3. Story, Setting and Character

3.1. Story and Narrative

3.1.1 Story Summary

Amelia's hometown is having trouble surviving because of environmental issues and so she sets off in search of a mythological artifact that will solve everything. She goes into a labyrinthian ruin to find the artifact but she encounters dangerous ancient robots guarding the keys to the artifact. Amelia retrieves the keys successfully and brings the artifact home. The credits will show the guardians reactivating and pursue Amelia to her hometown.

3.1.2. Skyne Civilization Backstory Summary

The Skyne civilization that settled on the side of a mountain once made an advanced artifact that helped them prosper. They use to worship a lobster mantaray wind god but they turned their focus of worship to the artifact. However, they became too protective of this artifact and in their paranoia they locked the artifact away. They then made the robots to protect the keys to the artifact. The ancient people began to value defense over welfare and the robots, as protectors of the artifact, eventually deem the ancient people too dangerous and so they banish their masters.

3.1.3. Story

Before the events of the game, Dababara town (Amelia's hometown) was in the trouble. Crops did not produce enough, air ran thin because of smog and the water was polluted.

One day, Amelia's closest friend gets sick. Doctors thought it was a normal fever but Amelia knew better. The time when all the machines would fail to do their work was coming.

Amelia decides to go into the ruins based on a rumored artifact hidden inside. This artifact is said to contain all the knowledge of the world, known and unknown, in the palm of your hands.

Along the way the player may learn about the Skyne's past if they find murals that depict their rise and fall. (See section 3.1.2) Additionally, with the use of environment storytelling players will discover that the Skyne ruins are the source of Dabara town's problems. The smog from the furnaces, and the dirty water from the ruins' canals were the cause.

Eventually Amelia recovers the keys necessary and then she unlocks the door to retrieve the artifact. The ruins self destruct in a final attempt to protect the artifact but Amelia manages to make it out. She takes the artifact back to Dababara town but unbeknownst to her the boss guardians reactivated and they would follow the artifact.

3.1.5. Conveying the story

Point to be conveyed	Location	How will it be conveyed?
Her friend	Pause Menu	A pendant on the side of the pause menu that shows her friends face.
Construction of the guardians	Landmark mural	Show sector 4 with the heat furnaces and metal pieces being chained and fished out of the molten liquid.
Banishment of the Skyne people	Landmark mural	Mural will depict the wide of the mountain with the Skyne people falling from it.
Skyne people's abandonment of the old god in exchange for the artifact.	Environment	Old god tributes being turned to chairs or broken down. Area motifs will be tacked on to show that they were placed after the building was made.
Skyne's prosperity with the artifact	Landmark mural	Depiction of Skyne people worshipping the artifact and crops growing around the artifacts light radius.
Amelias enginuity	Character Model	Her make-shift gun made out of junk.
Amelias prior knowledge of the	Main Menu or	A book that implies an adventurer's tale into

keys.	Pause Menu	the ruins prior to Amelia's dive.
Amelias regret that she kept Dababara town's assured death a secret.	Intro	A note that Amelia leaves behind explaining where she is going and why.
The Skyne peoples over protectiveness of the artifact.	Gameplay	The guardians and the door that seals the artifact.

3.2. Game World

3.2.1. General look and feel of world

Like the Wuling Mountains in China, the area where the ruins are located is a mountainous region made of quartzite sandstone. The ruins are also a place lush with flora and boast pretty sites such as ravines, gorges, streams and waterfalls. In terms of materials used to build, you may find iron, bronze, gold, and sandstone. Most of the metals except gold were used for the fabrication of the robots.

The game world itself is located at the very edge of one of these mountains. This gameworld is divided into three layers with the first topmost layer being on the topside of the mountain. The two remaining layers protrude from the mountain.

Amenities stayed mostly the same despite their change in worship, flame based lighting, gold accentuated households, rounded edges, and the use of stone brick.

Overall feel of the gameworld is mostly calm. The use of cool tones will dominate when underground. There are not too many threatening factors to the environment other than the darkness that comes with being underground.

3.2.2. Areas

The game world is divided into 4 sectors. These sectors are based on necessities for a civilization to be self-sustaining. Each area correlates to each other by featuring a common decoration theme and style.

The walls of the corridors, as with all the other corridors in the other sections, are lean and they use arches at specific intervals to keep the ceiling from collapsing. Lanterns are used to light the corridors. They have a special oil that never stops burning unless put out.

Sector 1 was the Skyne's agricultural center where they produced and distributed all goods both food and nonfood. It has a mixture of plants that need lots of sunlight and plants that need no sunlight (Bio-luminous mushrooms). These two types of plants belong outside and inside the ruins respectively. They used paddy terraces to plant their food and had several diagonal canals that distributed water as the water came down.

Sector 2 was the marketplace where all forms of trade and deals were made. After the Skyne were gone, the streets became littered with gold coins and gold treasures. These gold luxuries are stacked high, forming a sort of mountain range of gold. It is believed these items were moved there by the boss guardian of that area. The same way the guardians inherited their makers desire to protect the artifact, this guardian also inherited the love for gold.
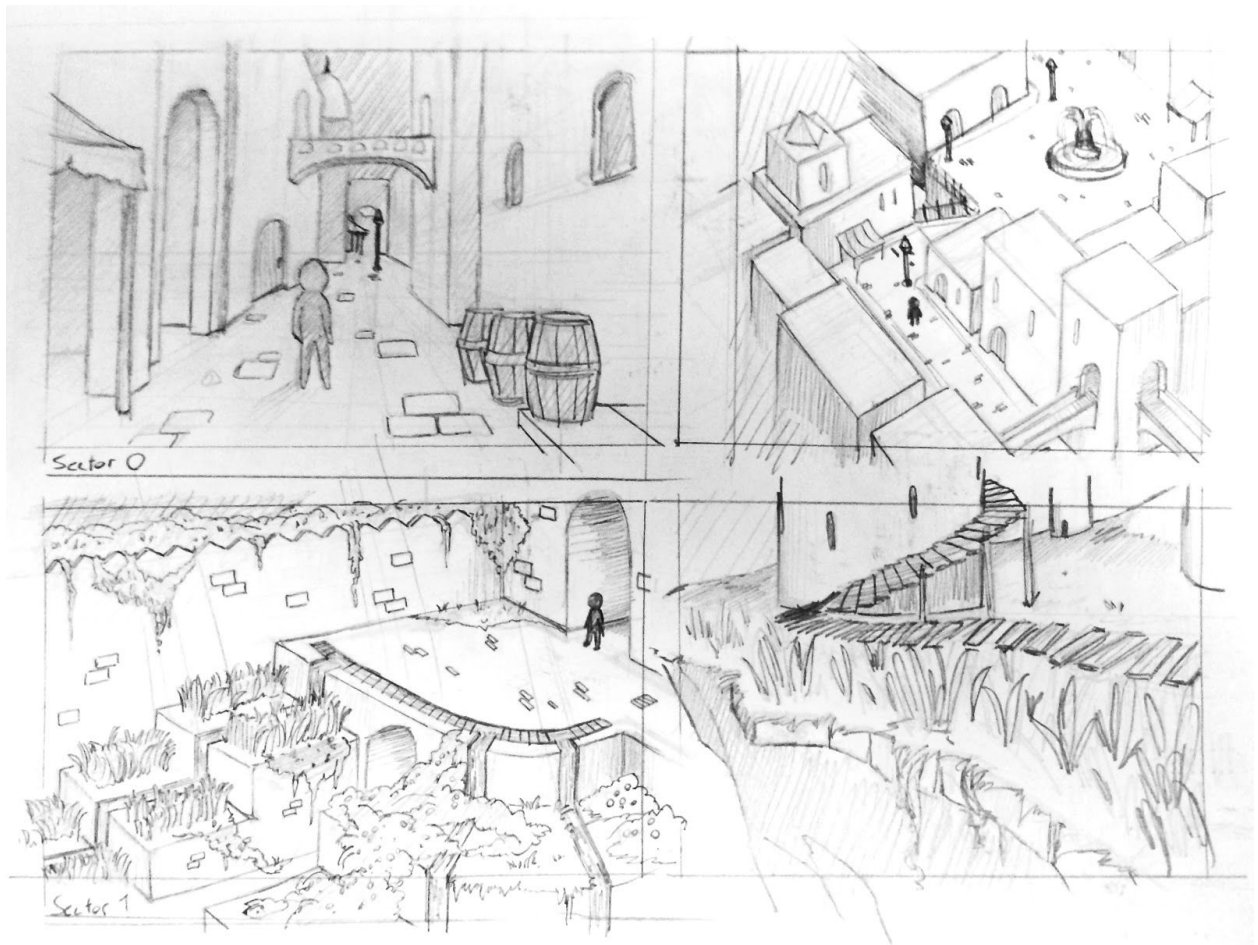
Sector 2(Above) and Sector 1 (Below)

Sector 3 is the now disfunctional irrigation system. Water only flows to some areas of the ruins because several areas were blocked off when the guardians decided to attack. Now some canals have mold and plants growing out of them because of the

lack of maintenance. From the top layer of the ruins, a machine would store and purify rainwater and send it on its way to all areas of the ruins.
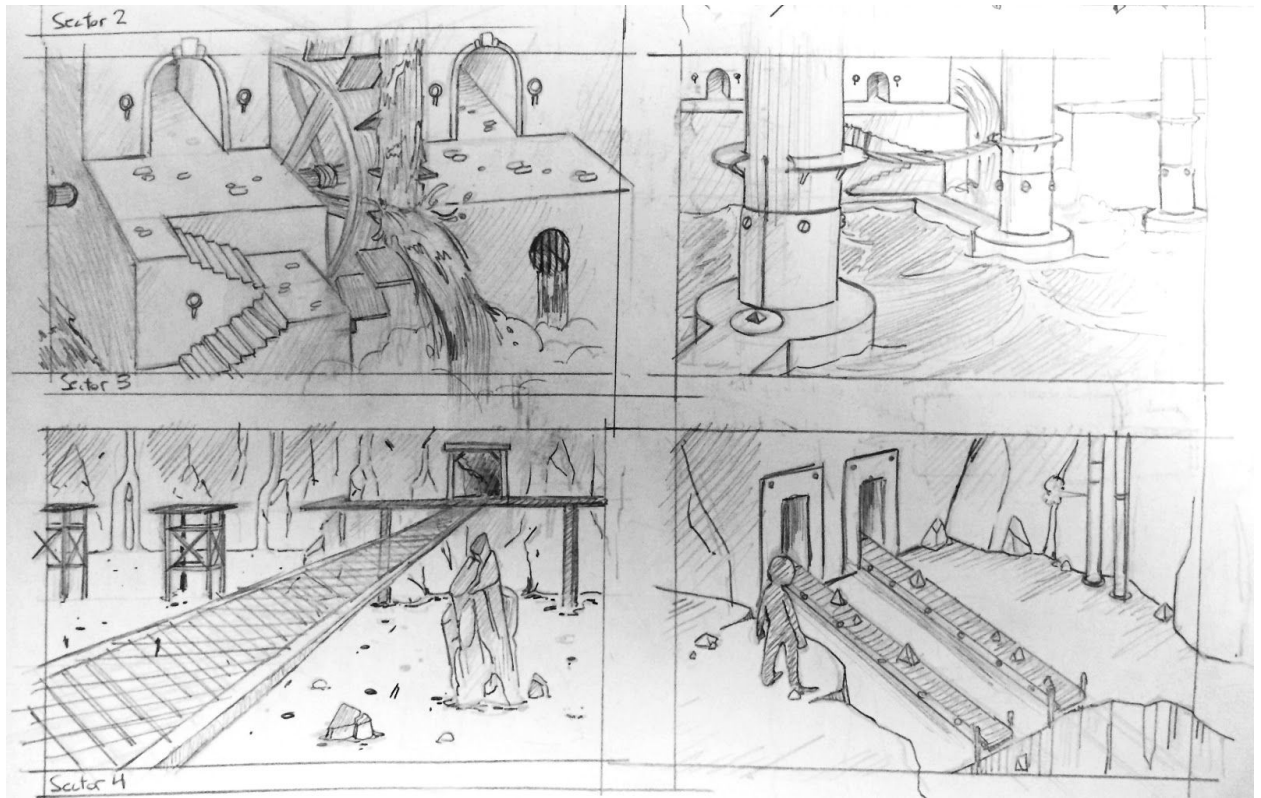
Sector 3 (Above) and Sector 4 (Below)

Sector 4 was the factory sector and was used to create the guardians and keep most of the ruins warmer. The molten metals used to make the guardians are now cooled off. The machines that automated the creation of the guardians with the use of templates are no longer functional. Surprisingly however, the main furnace machine is still working after several years of abandonment. This makes the area hotter than the rest. It is possible that the boss guardian is still making more minions with the use of the still active furnace.
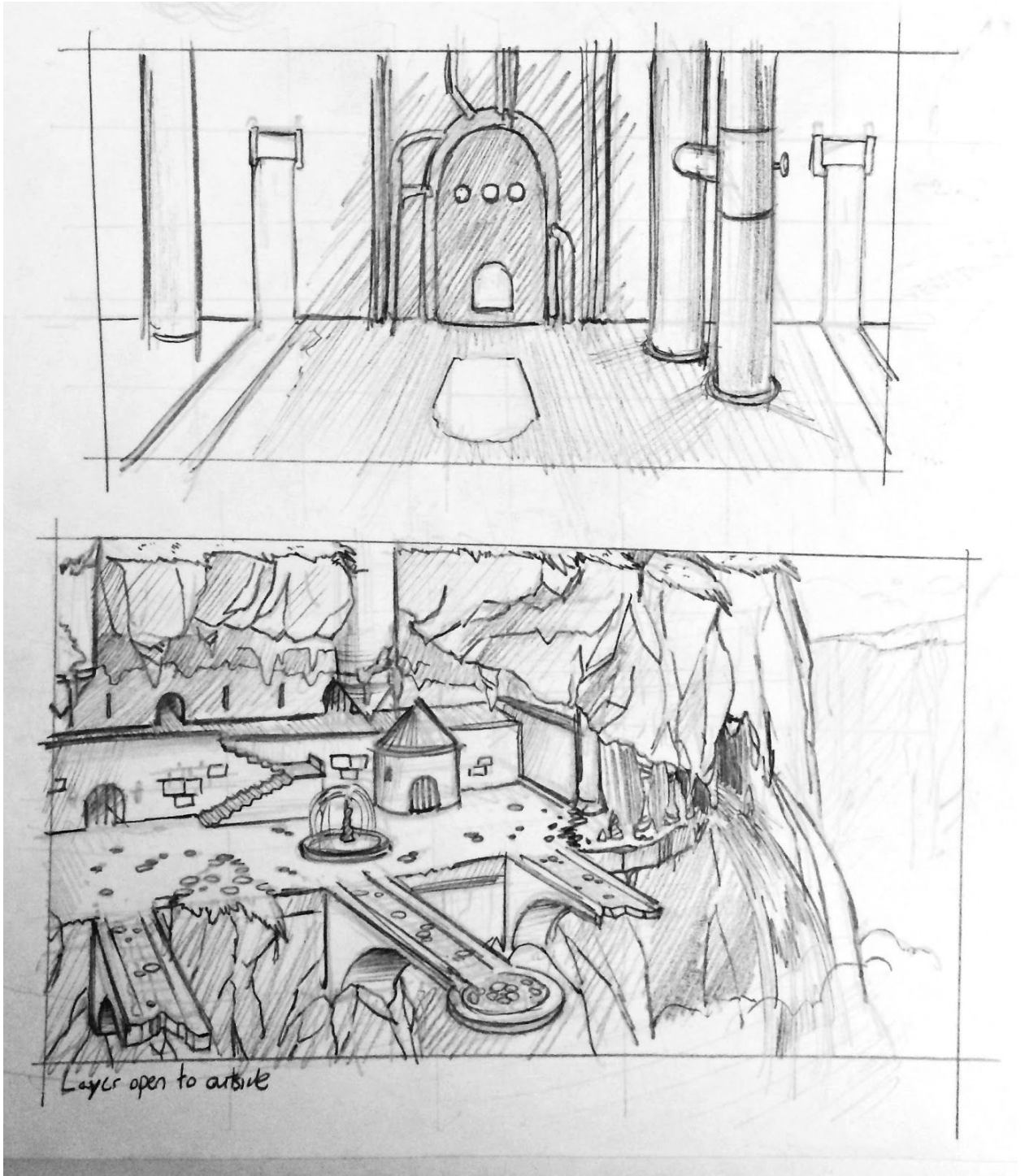
Sector 4 concept art.

Mob rooms are areas where the enemies can ambush the player. They can be identified by burn marks on the wall, and a distinct and creepy symbol in the middle of the room.

Save rooms are a small cube shaped room. They contain depictions of what happened to the Skyne civilization through murals on the walls. On the center of the floor there will be a beacon that will lure the player. This beacon is the savepoint and once they interact with it they can save.

The landmarks that the player will use to orient themselves vary in appearance for uniqueness but they are all memorable. The following is a list of landmarks, their general location and their description:

Landmark	Sector	Description
Spiral Tower	1	One pillar that oversees the rest of the surface map to an extent. It has a spiral staircase that leads to the top.
Big Tree	2	A large tree located in the center of the plaza.
Waterwheel	2	In Between sectors 3 and 4, it is a broken down waterwheel that maintains part of the power to the ruins.
Beast Statue Waterfall	3	A statue on the side of a cliff that is constantly spewing water.
Lake with small statue	3	A lake-like area with considerable amounts of foliage. There are stairs leading up to the 2nd layer on opposite sides of the room. It has a small statue in the center isolated from the perimeter.
Forge	4	A room where metals are smelted to make new robots. It is still running because the Guardian of Sector 4 keeps it active. A bridge passes over the smelting room where you can see the furnaces filled to the top with molten metal.
Spilled Crucible	4	A large crucible on its side with spilled and hardened iron.

Landmarks concept art for sector 1

Furnace

Another child Statue

Collapsed church (or smth)

Cracked Sphere

Lookout tower

Spilled crucible

Cooled metal Molten

Landmarks concept art

3.3. Characters.

Character Name	Amelia
Age	25
Relevance to the story	Protagonist
Appearance	Her most predominant feature is her large round glasses that she wears. She has a fit physique because of the kind of work she does in her engineering workshop. Despite her rigorous routine that keeps her active she is actually quite short.
Personality	Studious with a sporty twist. When she believes one of her many theories have a slight chance of being true she will not stop until she discovers the truth. This persistence could be seen as positive determination. However, it can also be a flaw as it has gotten her in trouble before. Especially when she is warned and she refuses to listen. She has done everything she can to help her people but it is not enough and this haunts her. She is not satisfied that all she can offer are temporary solutions to a seemingly unsolvable problem. That is why she decided to take the risk to find the Skyne treasure in hope of saving her hometown.
Abilities	+ Fit to pull several athletic feats + Excellent aim + Expert builder
Backstory	Not long before the story begins, Amelia conducted research on the Skyne civilization because she once heard of a story that they had an artifact that could bring any civilization back from the brink of extinction. She eventually discovered that the Skyne people were far more advanced than her people and so she began to believe that the artifact was real. Eventually she decides to explore the ruins on her own despite the warning. With only her trusty homemade gun by her side she is determined to search every nook and cranny for that artifact.

Amelia's hair and goggles concept art

Amelia concept art

Character Name	Ancient Guardians
Relevance to the story	Enemies

Appearance	Rusty, plants growing out of them, broken down, and made of metal. They have a uniform look to them.
Personality	They don't have a personality per se, but rather they act upon the commands that they were given when they were made and they stick to them to the letter.
Abilities	+ Varies depending on unit type
Backstory	Defensive measure gone rogue. They were originally designed to protect the keys to the Skyne treasure but they were so heavily modified and set to protect the keys that they even deemed their makers unworthy. They are now bound to the keys and the artifact, forever surveying the ruins and protecting it.

|	
Character Name	Skyne Civilization (Temporary Name)
Relevance to the story	Catalyst
Appearance	These folk lived high on the side of a mountain so they robbed themselves against the cold within the Skyne corridors.
Personality	They coveted their miraculous treasure and would not allow any outsider to come near it. It came to the point that they didn't allow any outsider. Eventually they began to distrust each other. However they were not always so devious. The Skynes use to be peaceful because they had nothing to fear. Their treasure gave them all they ever needed and there was not much interaction with the outside world.
Abilities	+ Construction of advance defense robots
Backstory	The Skyne people were prosperous thanks to the treasure that they coveted. However, this dependency on the treasure twisted the Skynes and made them overly cautious towards even the tiniest potential threat. It even caused distrusts towards each other. Eventually they began to prioritize defense over welfare. They turned their city into a labyrinth. Then they created the guardians. The guardians inherited the same reverence and overprotective attitude that their makers had towards the treasure and so they banished the Skynes from their home.

4. Levels

4.1. All Levels

Levels in Skyne are meant to be cleared in a semi-nonlinear fashion. For this reason levels are instead referred to as Sectors because they only take up a portion of the overall map. The idea is that a sector comprises of multiple corridors and rooms that all lead to one room where a key, or an upgrade is located.

In terms of introduction to the levels, the player will begin on a one way corridor that will teach the basics of gameplay. (More details on the next section) When they finish they will arrive to a hub room that contains a mural depicting the player's objective and the final objective in the center of the room. This room branches out into the rest of the sectors.

Sector 1 has green lighting and was the agricultural sector of the Skyne civilization. The training segment and the hub room belong to sector 1.
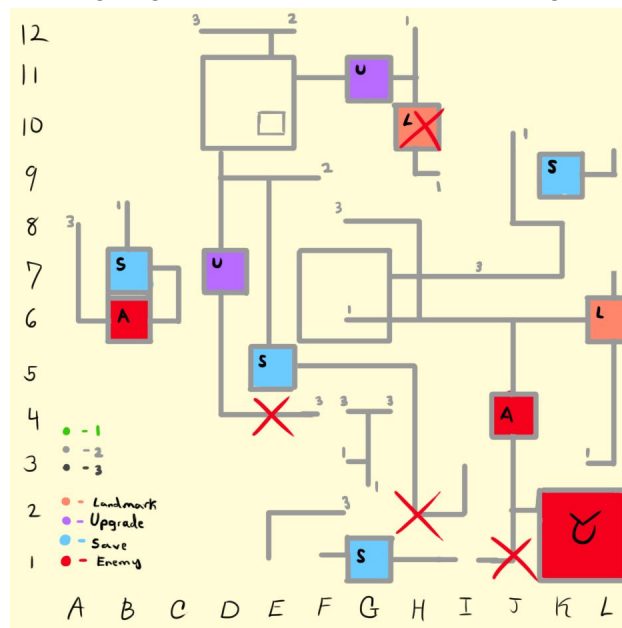
Layer 2 of the game world

Sector 2 is a yellow lighted area. There is a considerable amount of gold in the form of coins, treasures, artifacts and decorations. It used to be the marketplace for the Skyne. This sector has 3 paths and all of them lead to the far end of the boss room's corridor.

Sector 3 would be the blue lighted sector of the ruins. This sector is known for it's predominantly blue tone because of the lanterns located in the area. It seems to be the place where water was processed and distributed across the ruins. This area has special platforms that go up and down when the player shoots them.
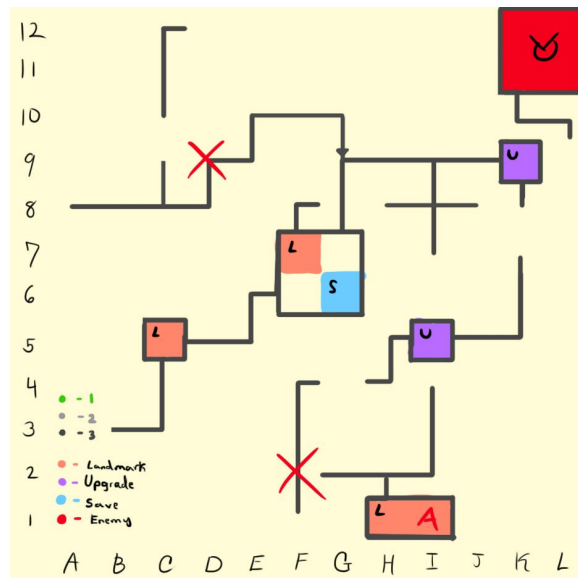
Layer 3 of the game world

Sector 4 is the red sector and it is dangerously hot. It is the area where the metals were smelted to created the guardians. There are 4 ways to access this sector but they eventually join into one entrance leading to the boss room.
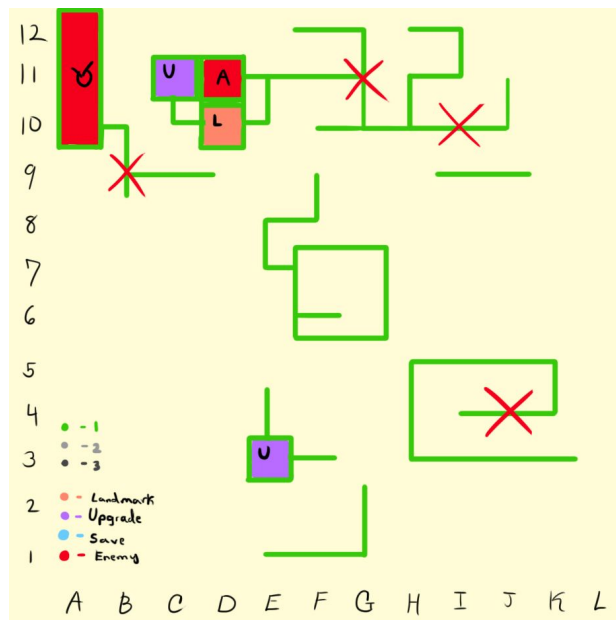
Layer 1 of the game world

Mob rooms are a special kind of room that are scattered across the map. They increase the amount of enemies that they spawn depending on how many keys the player has collected. The rooms can be identified by skulls and burn marks to indicate that a battle took place in that area. Additionally, there will be holes on the roof that spawn the enemies. Players have the choice of avoiding the room or going in and potentially be ambushed as soon as they reach the center of the room.

Save rooms are another type of special rooms where the player can stop and save their progress. These rooms contain no enemies and they are to be far from danger so that the player feels confident that they can relax.

The following mini sectors are sectors that do not have an iconic color to represent them but they do offer upgrades. At the center of these sectors there will be a room with an upgrade that will help the player in combat. Once the player has acquired these upgrades, they will have the option of a short cut but they must use the upgrade that they obtained in order to get through. This short cut is meant to help the player get back on track without forcing them to backtrack.

Mini Sector	Description
Mini Sector 1 - Double Jump Upgrade	At the end of the mini sector 1, the player will find junk parts for a double jump upgrade. The shortcut will simply be a corridor that is too high up to reach with a normal jump. The upgrade will be placed right below the elevated corridor so that the player sees it as they come in to investigate the glowing piece of junk.
Mini Sector 2 - Wall Jump Upgrade	In the room that contains the parts necessary to obtain the wall jump upgrade, A trap door will cause players to fall down a narrow chute. The player will fall on top of the junk and there is nothing else to do other than to pick up the upgrade. Now that they have the upgrade, players can get out of trouble by using the walls of the chute.
Mini Sector 3 - Dash Upgrade	The dash upgrade is located on a long narrow room. Players will notice the upgrade in the entrance and the rest of the room is actually the shortcut. Players must use the

	dash upgrade to get through a hall filled with guns safely. This armed hallway has guns lined up on both sides and they serve as a trap/defensive mechanism against intruders. It cannot be destroyed, only dashed through.
Mini Sector 4 - Rapid Fire Upgrade	The rapid fire upgrade will be in a wide open room. Players will fall into the room and they will notice that 3 rapid fire enemies are guarding the exit. With the rapid fire upgrade the player can dispatch these enemies in no time.
Mini Sector 5 - Wide Shot Upgrade	Mini Sector 5 contains the wide shot upgrade located in the entrance of a room filled with Charging enemies. The enemies will be far enough so that they do not detect the player as soon as they enter the room. The player can then pick up the Wide Shot upgrade to clear out the enemies quickly and proceed through the corridor on the opposite end of the room.
Mini Sector 6 - Charge Shot Upgrade	The charge shot upgrade's room will be a round room with 4 Fort type enemies near the perimeter of the room. Players must move quickly to obtain the charge shot and dispatch the enemies in a room without cover.

4.2. Training Level

At the beginning of the game, players will be placed in a large corridor. Behind them is an opening but the player can't see anything beyond it as it is whited out. This corridor is part of the training level that will be located in sector 1.

To teach the player how to jump they will encounter a small dent on the floor. When they fall in they can't progress because the ledge is too high. This will encourage the player to find a way out of that lent.

Shooting can be taught by placing breakable objects that can not be passed until the player shoots it.

For aiming, the player could encounter an elevator platform that is in its up position. The player must then figure out a way to aim at the obvious weak point under it to bring it down.

Once these small section is complete it will lead the player to the hub room where the beginning and ending of the game takes place.

Lastly, to teach the player their objective, they will encounter the final door in the center of the hub room and a large mural behind them. Upon closer inspection of the door and the mural, players will be able to deduce that they need 3 keys to get the artifact that is inside the door.

5. Interface

5.1. Visual System

On the top left corner of the screen players will be able to see their health bar and stamina bar. The health bar determines how many hits the player can take before they are defeated and they are sent back to the last save room they saved in. The player's health bar ranges from 0 to 100 starting at 100. Whenever the player is hit, their health will decrease depending on how the power of the enemy bullet. Defeated enemies will drop health pellets that will heal the player when they are damaged.

The stamina bar on the other hand keeps track of the players slow mo use to keep them from spamming it. When slow mo is activated, the stamina bar will decrease continuously until the player comes out of slow mo mode. The stamina bar will regenerate after 5 seconds have past since the last time the player came out of slow mo mode. When not in use, both of these UI bars will fade off the screen to clear up the screen space.

The boss's health bar will be located on the opposite corner of the player's health and stamina bar. The boss's health will vary but the appearance will still be the same. This is because the boss's health will increase depending on how many keys the player has acquired. Standard enemies will not display their health bars. When the player enters a boss room, the boss's health bar will fade in and the battle will begin. When the boss is defeated the health bar will fade away.

The camera model is a 3rd person camera that orbits around the player when the player uses the mouse or the right analog stick. When the player aims, the camera will

zoom in to an over the shoulder view of the player. The player's orientation will be based on the camera's rotation. The player can only rotate left or right but the player can aim anywhere on the screen.

On the lower left corner of the screen players will see a UI icon resembling a D-pad. On each edge there will be a number, starting on the top edge with number one and going clockwise, these numbers will represent the keyboard controls on top of game controller version. This UI component will only appear when the player has unlocked at least one gun upgrade. Players will be able to cycle through their gun upgrades using numbers from 1-4 or any of the D-pad directions.

The compass will be a transparent UI interface located on the lower right corner of the screen that is always active. The idea is that if the player sees a landmark that they cannot reach immediately, then they can use the compass to maintain a route towards the landmark even if they are underground and can no longer see the landmark.

When the player takes out the map, it will cover up the whole screen obstructing the player's vision. This map will show all the rooms that the player has been in and the empty space that they haven't searched. It will not show the player's location on the map to encourage the player to use the landmarks as reference.

5.2. Control System

Action	MAC / PC Controls	Game Controller (PS4 Controller)
Walk	W A S D	Left Analog Stick
Dash	Left Shift	Square Button
Jump	Spacebar	X button
Double Jump	Spacebar (while airborne)	X button (while airborne)
Interact	E	O Button
Shoot / Take picture	Left Mouse Click	Right Trigger
Aim	Mouse Movement	Right Analog Stick

Focus / Slow Motion Mode (Only in mid-air)	Right Mouse Click / TAB	Left Trigger
Map	M	Triangle Button
Pause / Menu	ESC	Start
Switch to Normal Gun	1	D-Pad Up
Switch to Rapid Fire Gun	2	D-Pad Right
Switch to Wide Shot Gun	3	D-Pad Down
Switch to Charge Shot Gun	4	D-Pad Left

5.3. Audio, music, sound effects

Music should be calm and wondrous and capable of looping several times without becoming annoying. The music changes from wondrous to tense whenever an enemy has spotted the player and they engage in combat.

SFX	**Description**
Footsteps	x2 footstep sound effects.
Gun shot	IMPORTANT! Must be juicy, it should NOT sound like a pea shooter. It should have a considerable amount of bass and umph to it.
Slow Motion Mode	Shutting down type sound effect.
Jump	Thin woosh that rises.
Wall Sliding	Like sliding on dirt.
Pause Menu	Button pressing SFX

Dash	A whoosh.
Keys	Sound that plays when the player acquires ones of the keys.
Player Detected	Distinctive sound for when the enemy spots the player
Taking damage	A grunt
Dying	A fainting noise

Music	**Description**
Exploration	Music that plays when the player is not engaged in combat. Should be calm and wondrous.
Enemy Encounter	This music plays when an enemy has spotted a player.
Title screen	Music specifically for the title screen that is suppose to set the adventurer mood.

6. Artificial Intelligence

6.1. Opponent and Enemy AI

Enemy spawning will be a mixture of predefined enemy count and enemy count based on the amount of keys that the player has.

Most of the encounters will have a predefined number of enemies in the room determined by the level designers. However, enemy count in mob rooms may vary pending on the amount of keys the player has collected.

6.1.1. Common Enemies

Charger - (Small Charging Enemy)

Small enemies that surprise attack the player by charging at them as soon as they see the player. They will not stop charging until they have collided with a wall or until they have charged for 5 seconds. They turn around slowly to execute another charge.

Health	30
Damage Output	5
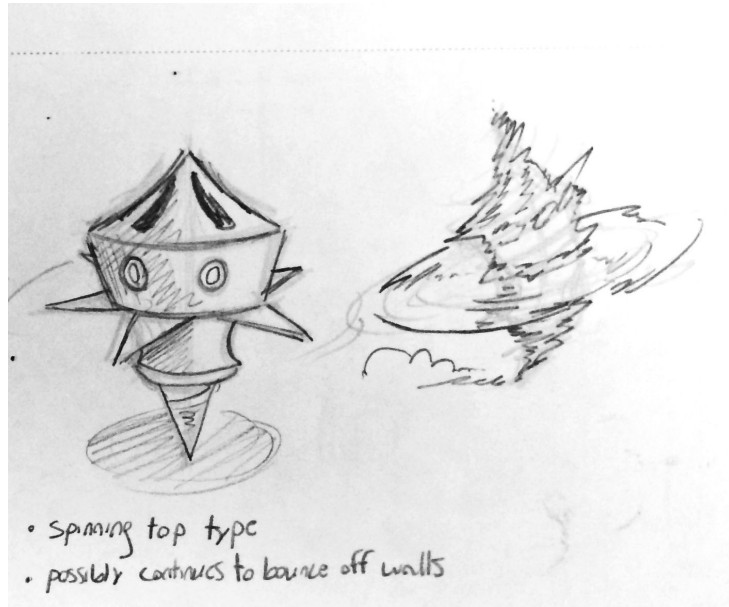
Charger enemy concept art

Bolt - (Small Pea Shooter Enemy)

A standard enemy that shoots on occasion. It is not very strong but it makes up for it with high mobility. Once it detects the player it locks onto them by circling around the player. Note that the enemy will not be moving at all times but it will choose to orbit clockwise or counter-clockwise for a few about 3 seconds and then stop to choose its next action.

Health	50
Damage Output	10

Bolt
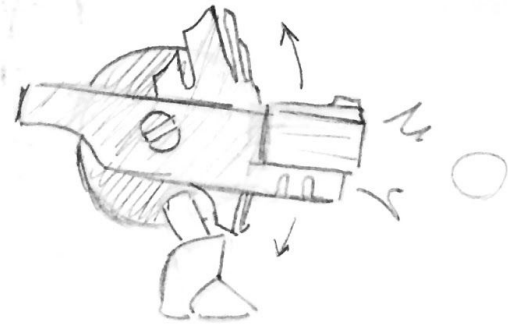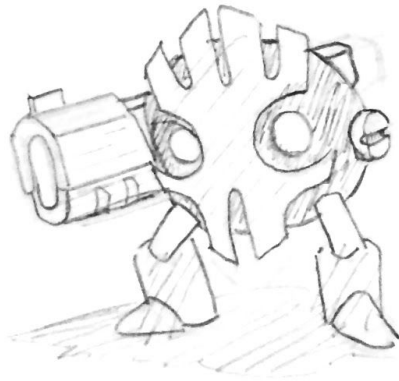
Bolt enemy concept art

Fort - (Big Slow Strong Enemy)

This enemy is not very fast but it boasts a high endurance and it packs a punch. If the player is not careful these enemies will swing at the player and deal heavy damage. It is completely impervious from the front-side so the player has to find a chance to attack from behind.
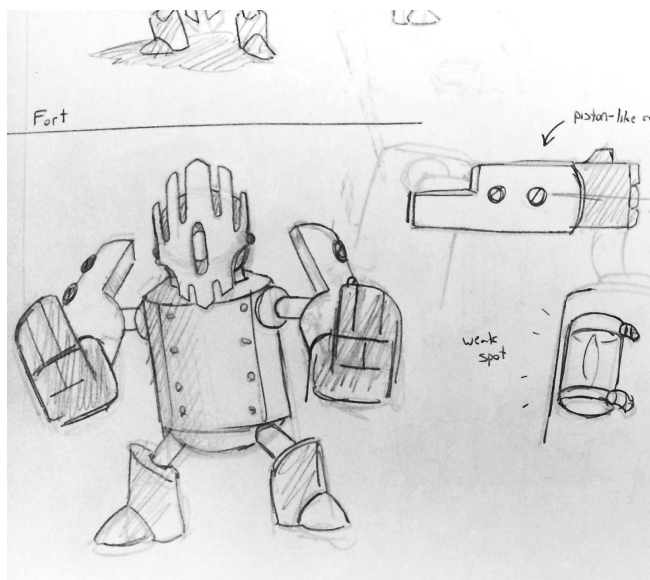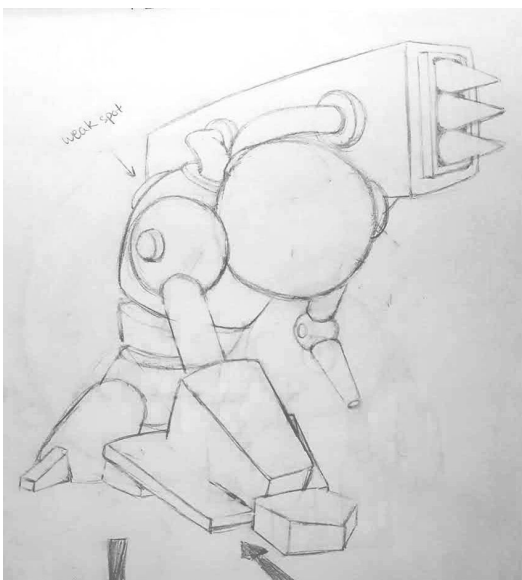
Health	150
Damage Output	25

Fort enemy concept art.

Sentry - (Tall Rapid-Fire Enemy)

These enemies are long-range sentries that are mostly stationary, but they will move occasionally to reposition themselves. They are not very strong. They fire 5 bullets at a time before they have to cooldown. The level of their difficulty could be determined by the area in which they are located. The wider the space the easier it is to defeat them because there is more space to dodge. Otherwise, the narrower the space the harder it will be to dodge their rapid fire.

Health	100
Damage Output	5
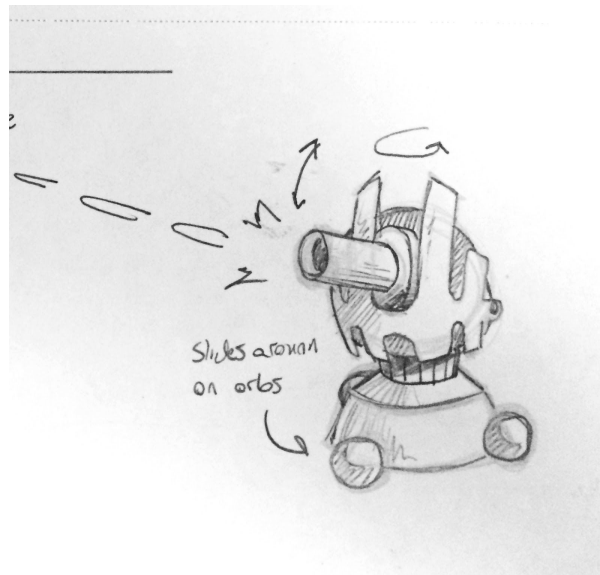
Sentry enemy concept art

6.1.2. Bosses

There will be 3 in total throughout the game and each one of them has a unique attack pattern and gimmick based on the game's mechanics. Players must use what they've learned in the ruin to defeat these monsters.

Guardian 1 (Yellow)	Description
Health	200
Attacks	

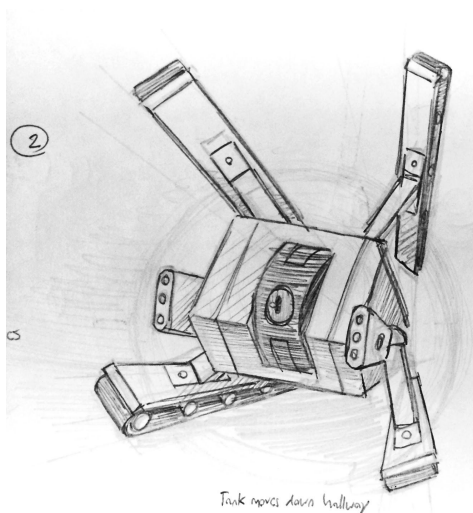|	Big Orb - Guardian charges and launches a large spherical projectile that can be eliminated by shooting it enough times or by dashing out of the way.	
	Damage Output	50
	Multiple Small Homing Orbs - Guardian launches around 4-6 smaller orbs that can be shot down. These orbs are not particularly a threat but they will be annoying if the player doesn't get rid of them.	
	Damage Output	10 each
Defenses	Enemies in the hallway	
Weak point	On its chest	
Location Description	The room will be a corridor with a round room at the end.	
Strategy	Players will start from the corridors entrance and make their way to the round room to damage the boss. If the player neglects the smaller orbs they may find that dodging and defending themselves against the bigger orb will be more difficult. If the player happens to have the dash upgrade they should be able dodge out of the big orbs way.	

Boss 1 concept art

Guardian 2 (Blue)	Description	
Health	200	
Attacks	Ground pounding - Creates multiple shockwaves when it stomps the ground.	
	Damage Output	10 each
	Laser beam - A massive beam coming from the weak point.	
	Damage Output	75
Defenses	Opening and Closing hatch	
Weak point	Inside hatch, Somewhere on its upper body	
Location Description	In a square room with the boss at the center. 8 platforms will surround the boss in a square formation. The player can shoot the platforms to make them go up. Only one platform is active at a time so players must jump and use their slow mo to trigger the next platform.	
Strategy	Players have to use the platforms in the room to go up to eye level with the boss. It is then that the boss will open its hatch and begin charging its beam. Players must shoot the boss's weak point while it is exposed and before it fires its beam. Before it fires its beam, players can either jump to the next platform or get down to the ground. While on the ground level, the boss will stomp the ground causing frequent shockwaves.	
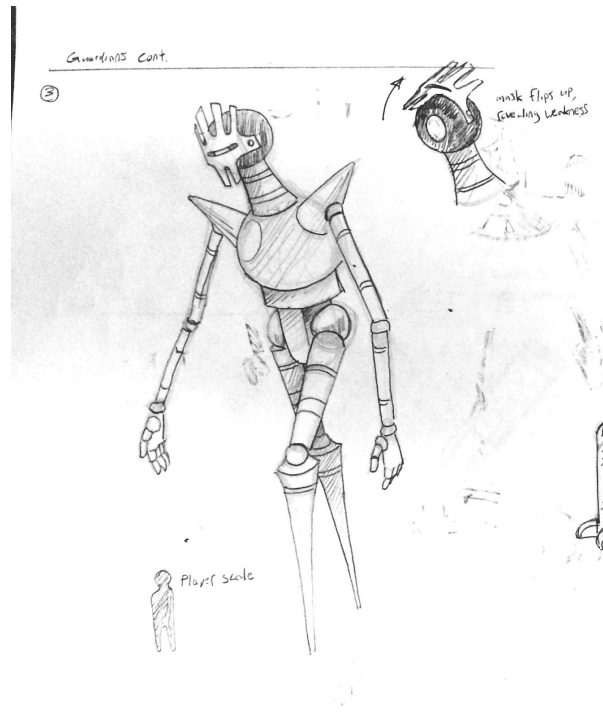
Boss 2 concept art

Guardian 3 (Red)	Description	
Health	200	
Attacks	Charge attack - On occasion the boss will charge at the player. Player must get out of the way so that it smashes against the wall and leave itself vulnerable. When it crashes against a wall it will release enemies from the ceiling.	
	Damage Output	50
	Destructo Disk - A disk beam attack that the player must jump over to avoid.	
	Damage Output	30
Defenses	Enemies that fall from the ceiling when it crashes against a wall.	
Weak point	2, one on each side. (Left & Right)	

Location Description	Simple circular room so that we don't have to worry about the boss crashing against a corner.
Strategy	Players will can immediately shoot the two weak points that the boss has but they can also wait for the boss to do its charge attack. If they player successfully dodges the attack then the boss will smash against a wall and it will be vulnerable to the player's attacks.
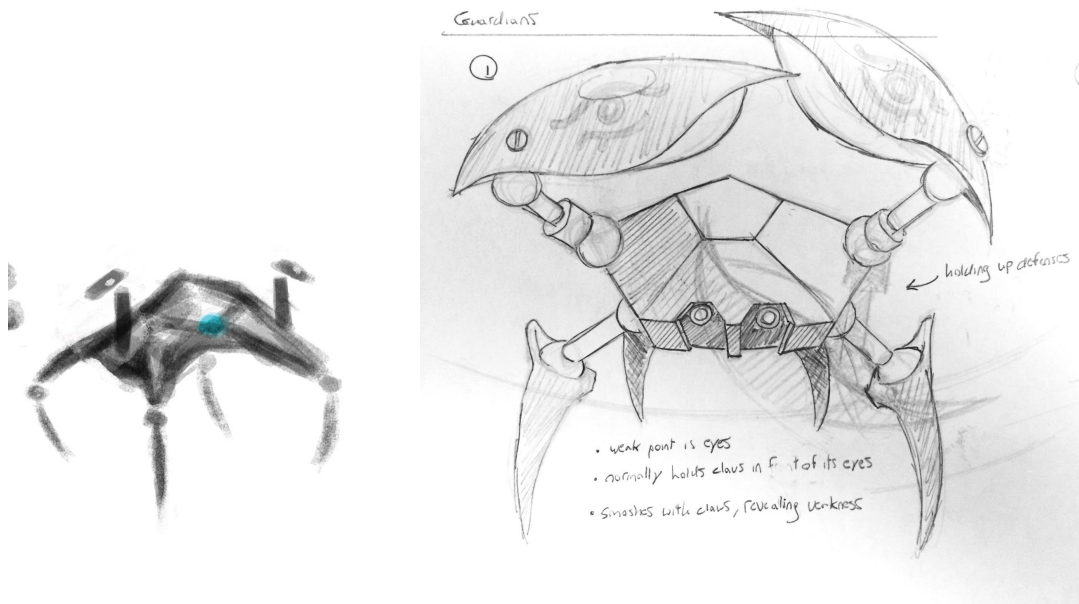
Boss 3 concept art.

7. Technical

7.1. Target Hardware

The game will be initially released as game for the OSX operating system since the team has MACs as their primary work machine. If the OSX version of the game is successful a PC port will be developed to address windows users.Ideally the game should also have a fully functional PC version as the majority of the people that play games on their computers use the Windows operating system.

Minimum System Requirements for MAC	
OS	OSX Mountain Lion
CPU	2009 or newer dual-core Intel

RAM	4GB System Memory
GPU	Nvidia GeForce GTS450 or AMD Radeon HD 5800

Minimum System Requirements for Windows	
OS	Windows 7 64-bit
CPU	2009 or newer dual-core Intel or AMD
RAM	4GB System Memory
GPU	Nvidia GeForce GTS450 or AMD Radeon HD 5800
DX	Version 9.0

7.2. Development hardware / software / game engine

Type of Software	**Software**
3D Modelling Software	Maya
Normal Maps Generation	Crazy Bumps + 3Ds Max
Texture creation	Photoshop
UI creation	Illustrator
Game Engine	Unity
Language	C#

8. Game Art

The artstyle for the models will be low poly to keep with the cartoonish theme and to alleviate the amount of time it takes to make all the models. These low poly models will then be smoothed out using Autodesk Maya's Smooth feature. Artist will focus on big shapes and a discernible silhouette when concepting. Model textures will be plain with some soft shading where necessary. We will rely on deformation maps to give the models some visual interest. Furthermore, cell shading and the use of rim lighting will be an important aspect of the game's cartoonish look.

([Link](#) to the rest of the concept art.)

8.1. List of Model assets

Model Asset	Description
Character	An female engineer around 23-28 years of age. She is short and wears big round glasses.
Gun	One handed gun that she will use to dispatch enemies. It should preferably be energy/electric bullets but if you want to make a standard bullet gun then that is fine to.
Keys	Not necessarily normal keys.
Junk	These will be the items that the player picks up to get upgrades. Based on your enemy designs they will be generic looking broken down pieces.
Charger (Small Charging Enemy)	A robot with features that resemble a ram.
Bolt (Small Pea Shooter Enemy)	A simple canon will do with this one. It will look like an obelisk.
Fort (Big Slow Strong Enemy)	I imagine this one being very wide and sturdy with two shields that it can rotate around with. It doesn't have to be that

	but it does need some form of shielding to protect its front side.
Sentry (Tall Rapid Fire Enemy)	This one could have a gatling gun somewhere.
Sector 1 (Green)	The Agricultural sector of the Skyne civilization.
Sector 2 (Yellow)	The marketplace filled with abandoned gold coins and riches.
Sector 3 (Blue)	This sector is home to the irrigation system that distributes water all throughout the ruins.
Sector 4 (Red)	Sector 4 is the factory area where the Skynes focused on perfecting they engineering craft.
Mini Sector 1	See the Mini Sector section in section 5.1
Mini Sector 2	
Mini Sector 3	
Mini Sector 4	
Mini Sector 5	
Mini Sector 6	
Mob Room	Spooky rooms identifiable by skulls and burn marks.
Save Room	A place where Amelia can sit down and take a look at her map.
Double Jump Upgrade	A sort of Jetpack upgrade
Wall Jump Upgrade	Gecko Gloves. Neon color on the bottom.
Dash Upgrade	Some sort of boot attachment
Wide Shot Upgrade	A wide thin attachment to Amelia's gun.

Rapid Fire Upgrade	More barrels attachment to the gun.
Charge Shot Upgrade	A bulky attachment to the gun.
Guardian 1 (Green)	A snake robot that comes out from the center of the rounded room.
Guardian 2 (Yellow)	A mechanical statue stuck to a wall. It can move its head and arms but the rest of its body is encased in stone.
Guardian 3 (Blue)	Balances on one leg and that leg is similar to a jack hammer. Its mouth will work like a hatch that reveals its weak point or it could be on its head.
Guardian 4 (Red)	A spider robot.

8.2. List of UI assets

UI Asset	Description
Button	Start Button Quit Button "Exit to Main Menu" Button They are all be the same button, the text could just be switched out.
Music Volume icon	Typical music icon
SFX Volume icon	Letters that say SFX should be fine
Slider Bar	The bar on which the handle glides on.
Slider Handle	The handle that controls the volume.
Map	A map of the whole game world divided into its 3 layers and broken down into a grid of 12 x 12.
Crosshair / Dot	A typical crosshair.

Normal Gun Bubble Icon	An icon to represent the normal gun when cycling through upgrades.
Wide Shot Upgrade bubble Icon	Icon to represent the wide shot.
Rapid Fire Upgrade bubble Icon	Icon to represent the Rapid Fire.
Charge shot Upgrade bubble Icon	Icon to represent the Charge shot.

8.3. List of animations

Player Animations	**Description**
Idle	Slight bend of legs in a ready stance. Secondary motion on hair.
Walk / Running	Very stretched legs, very exaggerated movements. Secondary movement on the hair, backpack, and cloth.
Jumping	Exaggerated jump. At the peak of its arc Amelia's legs will be completely folded.
Double Jump	Amelia holds onto her backpack straps and the jetpack activates its thrusters giving her a boost. At the peak of her second jump Amelia spreads her legs completely, doing a "split" in the process.
Wall Slide	Holds on to the wall while sliding down. She will look the opposite direction to the while doing so.
Dash	She tilts towards the direction she'll dash similar to a running stance and then dash.
Shooting	One handed shooting, stylized to fit Amelia's personality.

Dying	Amelia grasps her chest and faints head first to the ground. The amount of bounce she'll have upon impact will be exaggerated.
Pick-up keys	The character will quickly build the upgrade out of the parts as soon as they interact with them. This animation will just consist of Amelia sitting down and tilting her hips left to right. A cartoonish dust particle effect will cover up most of the process so it does not have to be too detailed.
Stunned Animation	When the player gets hit by the first boss' shockwave attack.
Save / Study animation	Takes out a map and studies it.

Charge (Small Charging Enemy Animations)	**Description**
Idle	Head moves like a bobblehead.
Movement	Normal quadruped movement.
Charging	Head looks down and enemy charges forward like a ram.
Death	Drops on it side and explodes.

Bolt (Small Pea Shooter Enemy Animations)	**Description**
Idle	Constantly squating.
Movement	Swift back and forth movement of legs.
Shooting	Prepares a solid stance and shoots.
Death	Drops on it side and explodes.

Fort (Big Slow Strong Enemy)	Description
Idle	Arms and knees bend. Head bobbles.
Movement	Stomping motion
Shooting	Whole body jerks back when it fires.
Defend	Raises front side shields.
Death	Drops back and explodes.

Sentry (Tall Rapid Fire Enemy)	Description
Idle	Legs bend and unbend like if it were perpetually squatting.
Movement	Waddle like a penguin.
Shooting	Arms jerk back and forth 3 times when it shoots.
Death	Drops on it side and explodes.

Boss 1	Description
Idle	Perfectly still pose. Motion on the hands and neck to indicate that it is active.
Charge Chest Blast	Hands crossed chest in X formation then sudden release.
Shoot mini orbs rapidly	Mini orbs blasted from head cause the head to jerk back and forth every time it shoots.
Death	Falls over and shuts down.

Boss 2	Description
Idle	Head bobble and knees bending in place.
Ground pound	Pounding the ground like a jackhammer and creates a shockwave.
Open to reveal weak point	Hath opens to reveal weak point and start charging laser beam.
Death	Falls over and shuts down.

Boss 3	Description
Idle	Head bobble and knees bending in place.
Charge Attack	Running animation but with its head down on a ramming position.
Crash against wall	Add secondary movement of backside going up and then down after it crashes.
Shoot Disk	Prepares itself and then shoots its destructive energy disk.
Death	Falls over and shuts down.

9. Schedule

Milestone	Date	Art Tasks Completed	Programming Tasks Completed
GDD Delivery Week 5	February 13	All Concept art and Reference Sheets	Movement Scene Loader Slow Motion Mode Invincibility Frames

Turn in First Playable Week 6	February 20	Amelia Modeled Props Basic Hallway Unit Modeled	Blocked out world Player Shooting Item Pick Up Over the shoulders Aim Full Key Input Functionality Scene Change / Scene Flow Player & Enemy Health
Work on Alpha Build Week 7	February 27	Charge Enemy Modeled Bolt Enemy Modeled Fort Enemy Modeled Sentry Enemy Modeled	Enemy AI Enemy Movement Enemy Aiming & Shooting Enemy Health Drop

Work on Alpha
 	
Week 8
	March 6	Boss 1 Modeled
		Boss 2 Modeled
		Boss 3 Modeled
		All Rooms Modeled
		    + Save Room
		    + Mob Room
		    + Hub Room
		All Landmarks Modeled
			Boss 1 AI
			Boss 2 AI
			Boss 3 AI

Work on Alpha Week 9	March 13	Spring Break	Spring Break
Turn in Alpha Week 10	March 20	UI Complete UV Mapping Complete	Save & Load Game Functionality Implement all art assets Double Jump Dash Wall Jump Rapid Fire Wide Shot Charge Shot
Work on Beta Week 11	March 27	Texturing Complete Deformation maps Complete	Add Cell Shading Add Global Illumination Sight Impairment Leap Frog Functionality Play test & Bug fix

Work on Beta
 	
Week 12
	April 3	Rig all that animates
		    + Amelia
		    + Charge
			Play test & Bug fix

		+ Bolt + Fort + Sentry + Boss 1 + Boss 2 + Boss 3	
Turn in Beta Week 13	April 10	All Animations Complete and implemented	Play test & Bug fix
Work on Gold Week 14	April 17	Revise Models Revise Animations Revise Textures	Play test & Bug fix
Work on Gold Week 15	April 24	Revise Models Revise Animations Revise Textures	Play test & Bug fix
Post Mortem Class Recap Week 16	May 1		