



The Creation of
Redstone Hollows

Written and presented by



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Chapter One

The Beginning

The enchantment for video games began on an unexpected day when I was invited to spend some time with my brother and his best friend. I entered the basement where my brother's friend had his den of video games, TV, PCs, and boardgames. What I didn't expect was how taken I would be by the game they were playing on the flat screen TV. Playing was Bethesda's famous title, *Oblivion Elder Scrolls IV*.¹ There was a vast collection of magic, lore, mythical creatures, medieval towns, complex stories, and so much more that my young seven year old imagination ate up. Before ever seeing a video game like this, I had played *Dungeons & Dragons*² with my brother, roleplaying medieval adventures and spending hours drawing maps from my imagination, but it was when I saw *Oblivion* that I knew not only could you bring imagination to life through video games, but it sparked the idea that maybe one day, I could be a part of that creative world.

For this project, I am collaborating with Chris Davidoff, Chris is a CU Alumni, he graduated from CU in 2019 with a degree in Computer Science. While I am in charge of art and visual assets, Chris handles the actual implementation of assets in Unity and coding in C#. Despite seeking career opportunities within the realm of electrical and software engineering, Chris is returning to his roots and passion for video games and game development. The only previous game development history between the two of us is Chris's past experience with modding the well known game, *Halo 2*³ in 2009. We collaborate on game mechanics, overall aesthetics, storyline, art design parameters, organization, naming conventions, and everything else that doesn't fall strictly in my jurisdiction or his.

¹ *Oblivion Elder Scrolls IV* [Video Game]. (2006). Bethesda Softworks.

² *Dungeons & Dragons* (commonly abbreviated as **D&D** or **DnD**) is a fantasy tabletop role-playing game (RPG) originally designed by Gary Gygax and Dave Arneson

³ *Halo 2* [Video Game]. (2004). Microsoft Game Studios.

Currently, the game we are making and the project we are discussing here has the working title of *Redstone Hollows*. *Redstone Hollows* is a RPG (roleplaying game) set in a Scandinavian fantasy landscape having you (the main character) work with nature and your community to find balance between the two worlds. The visual aesthetic is in a 2D isometric⁴ pixel art style with chibi⁵ characters. Since we are both working jobs for financial stability and I am attending my last semester in college with over seventeen credits, we do our best to dedicate as much free time to the development of this game as possible. It is hard to make an estimate on how much time per week we dedicate since the pressure of other school projects waxes and wanes creating inconsistent hours. We do have hopes of someday having additional funding, such as a kickstarter page, so we don't have to work other jobs but instead focus on game development. To make this possible, we intend on completing a playable vertical slice of the game by August 1st, 2021. A vertical slice is a term that refers to a singular portion of a game. In this instance, we want this vertical slice to be a polished prototype of the online cooperative play, farming mechanics, building mechanics and animal interactions. For now, we want to focus on this vertical slice, in contrast to the entire scope of what we want the game to entail, including quests, monsters, story, and so on. *Redstone Hollows* is planned to be released on, but not limited to, PC on a client called *Steam*, a world leading online video game distributor.



[fig 1. A *Redstone Hollows* graphic]

⁴ Isometric video game graphics are graphics employed in video games and pixel art which angle the viewpoint to reveal facets of the environment that would not be visible from a top-down perspective or side view, thereby producing a three-dimensional effect.

⁵ Chibi is a style of drawing in which the characters are drawn in an exaggerated manner to be very small figures with large heads, subsequently, cute

Chapter Two

Inspiration and Game Design Research

Despite *Elder Scrolls Oblivion IV* being the first creative spark that ignited my interest in the realm of gaming, there are a lot of sources of media that I've specifically explored for inspiration and expanding my media palette for this project. I'll start by reviewing direct inspirations for *Redstone Hollows* and then broaden my analysis to media I was introduced to through my research and exploratory scope.

The game that truly influenced the beginning of Chris and I's endeavour into indie game development is the title, *Stardew Valley*.⁶ *Stardew Valley* was developed by a solo game developer that went by the title of "ConcernedApe" but is more formally known as Eric Barone. Single handedly, Barone developed the entire game from art, to music, to code, to even writing his own game engine from scratch. Eric Barone is known as a "full stack" developer since he did everything himself. After releasing *Stardew Valley* through the publisher ChuckleFish, Barone's game got a lot of attention and became a big hit for years and is still well known five years post release. Not only am I deeply moved and inspired by Barone's story, but the game itself is something that closely resembles certain core game mechanics we hope to emulate, as well as its pixel art style. *Stardew Valley* is a 2D pixel art RPG that focuses heavily on the idea of owning your own land to farm or explore for resources while forming relationships with the nearby town. Many of those aspects I intend to involve in my game. A large focus will be on the maintenance and development of a player's land while also exploring side quests and relationships with the surrounding community.



[fig 2. Art from *Stardew Valley*]

⁶ *Stardew Valley* [Video Game]. (2016). Chucklefish



[fig 3. Character from *Harvest Moon*]

Another similar game that not only influenced me, but also Eric Barone's *Stardew Valley* is *Harvest Moon*⁷. *Harvest Moon* is a game that has been developed by multiple game studios since the franchise began. *Harvest Moon* is a game with many core game themes that *Stardew Valley* also centers around such as ranching & farming, townsfolk relationships, and storylines on the side. *Harvest Moon* is considered a 'feel good' game that allows for people to play who aren't super hardcore gamers while enjoying the low-stake friendly ambiance. It is approachable to most and brings to life the idea that many people desire - owning their own land and doing what they please with it.

J.R.R. Tolkien's, *Lord of the Rings*⁸ is a classic and well known piece of literature and cinema, not only because they built this incredible fantasy realm but also because they truly gave everything immense attention to detail, this includes world building, character development, and overall design. *Lord of the Rings* takes a lot of story inspiration from Nordic and Scandinavian mythology and folklore which is the same region *Redstone Hollows* is drawing its inspiration from. One aspect that really moved me when researching *Lord of the Rings* was the attention to detail down to making each costume. When filming the movies for *Lord of the Rings*, each costume was crafted with quality materials as well as inner embroidery that wouldn't be seen in film shots, but gave each actor a sense of authenticity and shows how a small act can demonstrate the dedication to thorough world building. In order to create Tolkien's universe, it took "Working with a team of 50 tailors, embroiderers, cobblers, and jewelers, Dickson⁹ attempted to make each costume lifelike, functional, and reflective of each character." (Houghton) I'm inspired by the costume & character design, world building, and dedication to the details of the craft. Even from my small team of two, much like *Lord of the Rings*, I think we can take our time researching, applying ideas, and refining them to create a much more in depth and thought out experience.



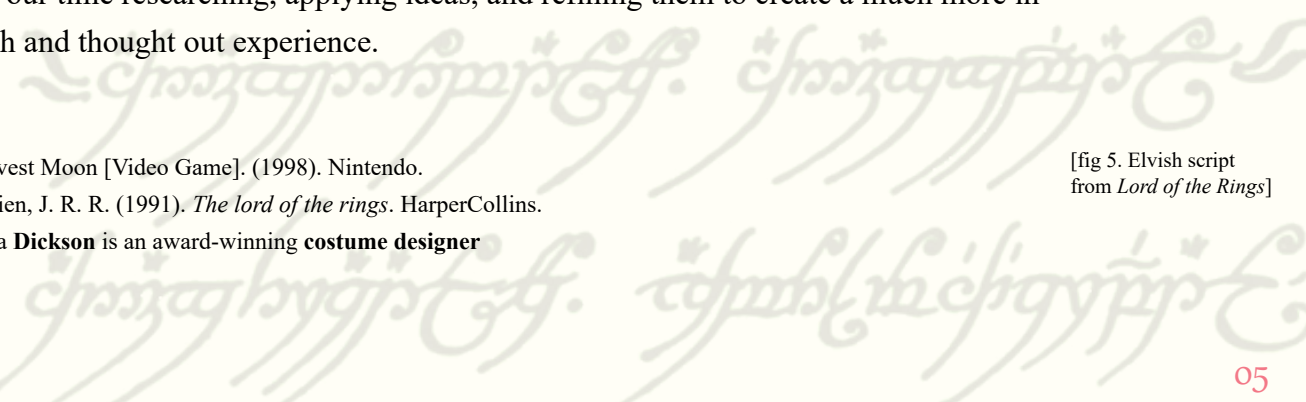
[fig 4. Character from *Harvest Moon*]

⁷ Harvest Moon [Video Game]. (1998). Nintendo.

⁸ Tolkien, J. R. R. (1991). *The lord of the rings*. HarperCollins.

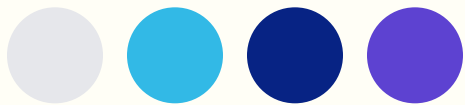
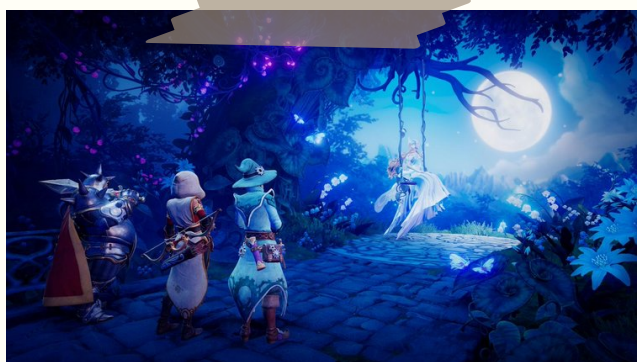
⁹ Ngila Dickson is an award-winning costume designer

[fig 5. Elvish script from *Lord of the Rings*]



Next in line is the side-scrolling, action platform-puzzle video game *Trine*,¹⁰ developed by Frozenbyte and published by Nobilis. Even though *Redstone Hollows* doesn't share the same side-scrolling functionality as *Trine*, we found this game to be of interest due to its overall aesthetics and clever puzzle game mechanics. *Trine* allows you to move through the map by figuring out puzzles to get from point A to point B while forcing players to switch between different characters that have differing abilities which enable them to complete the mini challenges and move on. This is best served in a co-op situation where each player plays someone with different skills and can assist each other in completing the tasks. Through playing this game ourselves, we considered the possibility of simple puzzle game mechanics to unlock new items or areas in our own game while furthering the concept behind the beneficial aspect of having a co-op game. Another attractive aspect to this specific game is the overall media aesthetics that *Trine 4: The Nightmare Prince*¹¹ implements. While playing it, I noticed the attention the developers had on the color palette as you move through the game. With each section came a new color palette, all of which was analogous, meaning the colors chosen are in groups of three that are next to each other on the color wheel, and a tertiary color. An example used in one of the levels was blue, blue violet, violet, and red violet to create a sense of a more magical based realm. As *Redstone Hollows* progresses, I'd love to implement more of this style of color palette for different areas and/or seasons within the game. I think having these contrasts between regions will help create a more unique stylized aesthetic that *Harvest Moon* or *Stardew Valley* lack.

[fig 6. Screenshot from *Tine 4: The Nightmare Prince*]



Shows the analogous color palette used throughout the game

screenshots from Trine 4

[fig 7. Screenshot from *Tine 4: The Nightmare Prince*]



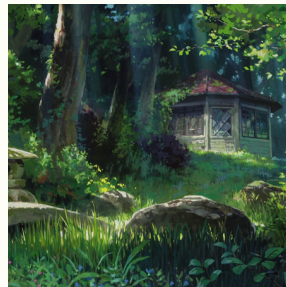
¹⁰ Trine [Video Game]. (2009). No publisher. -- Trine has additional series releases

¹¹ Trine 4 [Video Game]. (2019). No publisher.



[fig 8. Studio Ghibli animation layer]

Lastly, but certainly not least of big creative influences is Studio Ghibli movies - specifically ones done by Hayao Miyazaki. Out of the films I've seen, my favorite ones are *Howl's Moving Castle*,¹² *My Neighbor Totoro*,¹³ *Secret Life of Arrietty*,¹⁴ *Spirited Away*,¹⁵ and *Ponyo*¹⁶ to name a few. All of these films have this beautiful whimsical magical aura to them without all of them needing to be outwardly "traditional" magic and fantasy fueled. For any Miyazaki fans, it is easy to highlight his unique talent in both world building and storytelling. Even though on the surface, Miyazaki's choice in color may not seem as defined as *Trine's*, Miyazaki actually uses analogous color palettes many times to really contrast defining scenes and features.



[fig 9. Studio Ghibli animation layer(s)]

"I would like to make a film to tell children it's good to be alive" (Hayao Miyazaki). As far as a deeper feeling I'd love to convey by creating a piece of media myself, this is the message I want to keep close to my heart while molding *Redstone Hollows*. I am creating a game that allows you to explore a world with magic, potential friendships, learning how to work with your land and nature, playing with your friends (co-op), and all the while, hopefully, this sense of why it's good to be alive. My hope is for this game to not just be a game, but be an experience, much like how Miyazaki's films are many people's staples because of that special positive feeling you get from them and that sense of magic, wonder, and childlike appreciation for life.

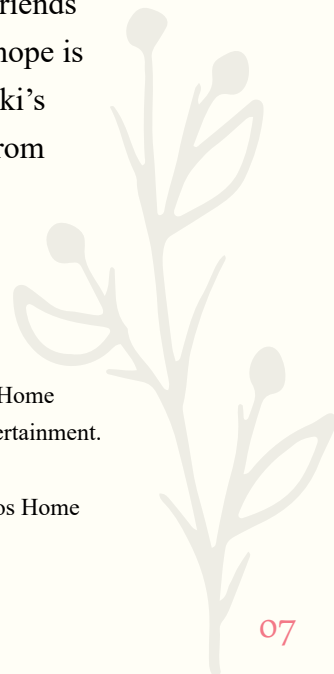
¹² Jones, D. W. (2008). *Howl's moving castle*. HarperCollins.

¹³ Miyazaki, H. (1988). *My Neighbor Totoro*. 50th Street Films.

¹⁴ Yonebayashi, H., Suzuki, T., Miyazaki, H., Niwa, K., Mendler, B., Henrie, D., Poehler, A., ... Buena Vista Home Entertainment (Firm),. (2012). *The secret world of Arrietty*. United States: Walt Disney Studios Home Entertainment.

¹⁵ Miyazaki, H. (2001). *Spirited Away*. Fathom Events.

¹⁶ Miyazaki, H., Suzuki, T., Lasseter, J., Lewis, B., Sohn, P., Kennedy, K., Marshall, F., ... Walt Disney Studios Home Entertainment (Firm),. (2010). *Ponyo*.





Chapter Three

Technical Decisions

Before beginning the deep delve into creating an indie game with a team of only two people, neither of us have had any experience in the software we are using now. As mentioned before, *Redstone Hollows* is being stitched together in the game & graphics engine, Unity. We chose Unity as the game engine because not only was it a readily available engine (vs making it yourself) but it also has extensive 2D and open source community support. A similar engine called Unreal wasn't considered because it lacked much 2D support and would have been a bigger hassle than help in creating this game. As far as any visual assets go, anything drawn in the overarching pixel art style is drawn in Aseprite. Aseprite is a program specifically designed for pixel art and keyframe animation. It supports functions like onion skins (to see frames before and after for animating purposes) and grouping features to group frames in labeled animations. The reason we chose to use Aseprite instead of a program like Adobe Photoshop is due to Aseprite's ability to hook into Unity as well as its significant animation support. Like Unreal, Photoshop would have been more of a problem than solution when it came to creating art assets. The last program we currently use is Adobe Illustrator for User Interface (UI) design. Using vector graphics to quickly try out different UI mockups has been much more effective than hand drawing everything in pixel art that may be dramatically altered as the game's aesthetic matures and a better understanding of the UX develops.

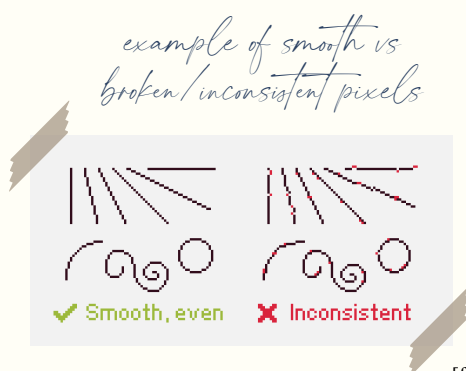


[fig 10. Software Logos]

the three main programs we are using to make this game

The first design choice was between a two-dimensional (2D) and a three-dimensional (3D) game. As a team, we decided that *Redstone Hollows* would take on the 2D style over the 3D style. The initial thought was that a 2D game is more approachable to both us as the game developers and the part of our audience that is new or unfamiliar with gaming. Even in a “cute” style game, people who don’t play games might still see 3D games as a challenge or game above a beginner's brow. As for Chris and I, 2D meant no 3D modeling or UV texture mapping in complex programs with steep learning curves like Blender, Maya, Cinema4D, or similar 3D modeling programs. 3D models also require rigging and full body/joint animation on top of everything else. Even though we have intentions to learn 3D modeling for future endeavors, as beginner game developers, we wanted to keep the barrier to entry as low as possible. Level design in 2D styles are generally faster since 3D has a cubic amount of space to design in while 2D has a squared amount of space. Once again, focusing back on our target audience, 2D games can run on older or cheaper hardware, while taking less processing power than its 3D counterpart. With all these aspects in mind, 2D was the way to go for our first indie game and introduction to learning about game object assets.

The following design choice, of course, was what art style we wanted our 2D assets to embody. There are two overarching concepts of two dimensional art; pixel art or high resolution art. Most people are familiar with high resolution art, for example, painting in photoshop. The other medium; pixel art is a lower resolution form of art, in which you draw an image at the pixel level. There are a multitude of reasons that I decided on this path. The first being that the art assets become easier to draw, but not in the way you think. Pixel art is like brewing a Pilsner or Lager beer. It is simple, clean and avoids complexities. The challenge that comes with this is that mistakes become evidently more obvious. In the case of pixel art, if a single pixel breaks a pattern, it can ruin the art piece. For example, a diagonal line can be shown as two pixels to the right, and one pixel down, in a repeating sequential pattern. If this pattern is broken, it is very apparent to the viewer. Even colors can influence the low resolution mindful influence. In the case of pixel art, you want to use as few colors as possible to create an image’s likeness, which means intentionality and color theory practices are crucial. Avoiding dull muddy color choices makes the focus on color harmonies, saturation, tints, shades, and tones all that more important.



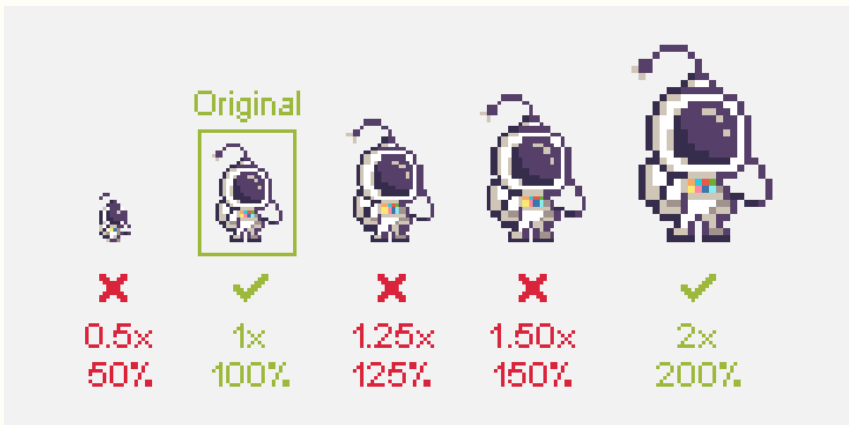
This carrot is drawn at different resolutions showing how it evolves

[fig 11. Pixel Art examples - <https://www.makeuseof.com/how-to-make-pixel-art-beginners-guide/>]

When drawing pixel art, I take a lot of liberties in my design to make assets look more readable while still looking interesting. I focus on the aspects I find most important to highlight while eliminating unnecessary detail since we are working at a low resolution (our reference resolution being 960x540). There are many examples in which adding too much detail can create a messy and unreadable image; not only causing overall lack of necessary contrast but causing eye strain and confusion for the viewer.

Speaking of resolution, there is no hard line that defines what resolution “pixel art” belongs to. The original gameboy (a mobile gaming device) had a resolution size of 160x144. A recent popular title made their game with a reference resolution of 480x270 (*Hyperlight Drifter*¹⁷). These resolution choices become important from both an aesthetic and technical perspective. On the technical side, it is important to know how the pixel art will scale to modern computer monitors. A very common resolution these days is 1080p, which is more formally written as 1920x1080. With a game like the previously mentioned *HyperLight Drifter*, that means the pixel art must be scaled up by the nearest divisible

factor. So, 1080 divided by 270 is 4. Meaning, the art must be scaled up 4 times to be, what is known as, “pixel perfect”. To help differentiate the pixel in my art, and the pixel that is on screen, we can use the term, Texel.



[fig 12. Pixel Art example - <https://www.makeuseof.com/how-to-make-pixel-art-beginners-guide/>]

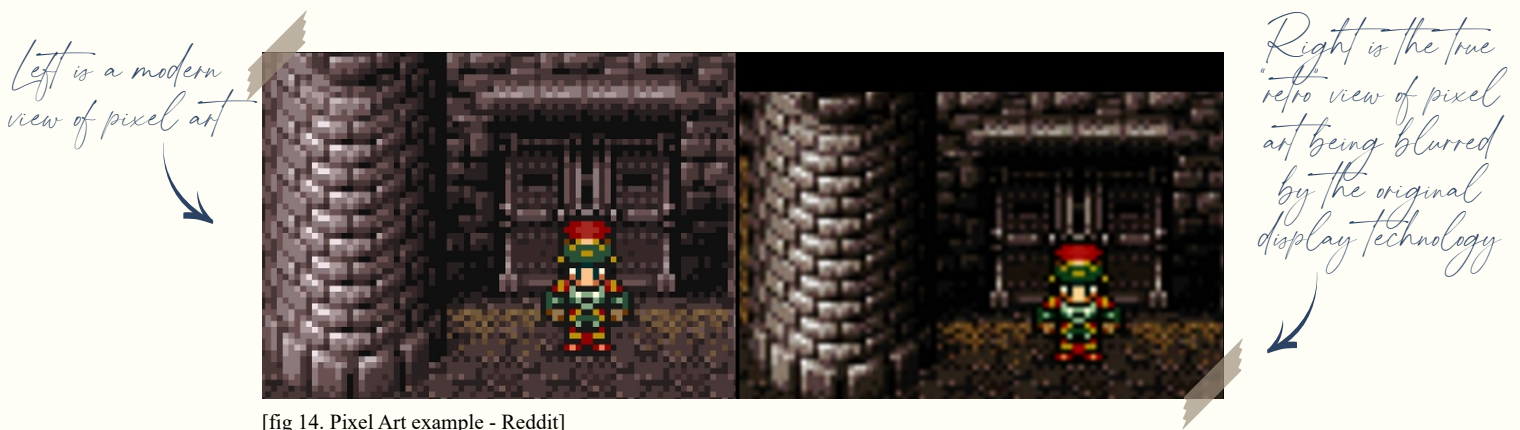
Texel refers to a texture pixel, whereas a pixel refers to a unit of screen space. In the case of a 1080p screen, there are 1080 vertical pixels. As for mapping a game meant for a screen with 270 vertical pixels, we will scale the artwork texels, to fit the amount of available pixels, by an integer. If this is not done, an undesirable warping or shimmering effect will occur as the translation of pixel-perfect texels to pixels cannot be done.



[fig 13. Pixel Art house for *Redstone Hollows*]

¹⁷ Hyperlight Drifter [Video Game]. (2016). Heart Machine, Abylight Studios

Another reason I chose the path to pixel art was because of the nostalgia surrounding this style. Pixel art has been used for many older well known games such as *Pokemon*¹⁸ (any games before when they started using 3D models in *Pokemon X and Y*¹⁹ in 2013), *Metroidvania*,²⁰ *Final Fantasy*,²¹ and many others. Modern titles that have adopted pixel art style include *Stardew Valley*, *Hyperlight Drifter*, *Terraria*,²² *Moonlighter*,²³ *Shovel Knight*,²⁴ *Undertale*,²⁵ *Hotline Miami*,²⁶ the list goes on. As you can see, even though pixel art is a style that originated in the 1970's, it's still a very popular medium today. Pixel art today however, is visually-very different than how it was presented when it first came to be. When computers first began to appear in homes, they were displayed on low resolution, typically 480p, cathode-ray-tube monitors (CRT). These monitors did not show rows of pixels, but rather lines of phosphor coated electrons that used magnets to deflect electron beams in order to illuminate parts of the screen. The result was an image that blended the pixels together, creating a result that looks much different than our modern LED (light-emitting-diode) monitors. As you can see in this image, a CRT view on the left and a modern view on the right, shows the same pixel art, but rendered on the different display technologies. You can see how the different technologies cast a very different look to the same underlying data, the texels.



[fig 14. Pixel Art example - Reddit]

¹⁸ **Pokémon**, also known as **Pocket Monsters** in Japan, is a Japanese media franchise managed by The Pokémon Company, a company founded by Nintendo, Game Freak, and Creatures.

¹⁹ *Pokemon X and Y* [Video Game]. (2013). Nintendo, the Pokemon company

²⁰ **Metroidvania** is a subgenre of action-adventure video games. Derived from the game series *Metroid* and *Castlevania*

²¹ **Final Fantasy** is a Japanese anthology science fantasy media franchise created by Hironobu Sakaguchi, and developed and owned by Square Enix (formerly Square).

²² *Terraria* [Video Game]. (2011). 505 Games

²³ *Moonlighter* [Video Game]. (2018). 11 bit studios

²⁴ *Shovel Knight* [Video Game]. (2014). Yacht Club Games (self published)

²⁵ *Undertale* [Video Game]. (2015). Toby Fox (self published)

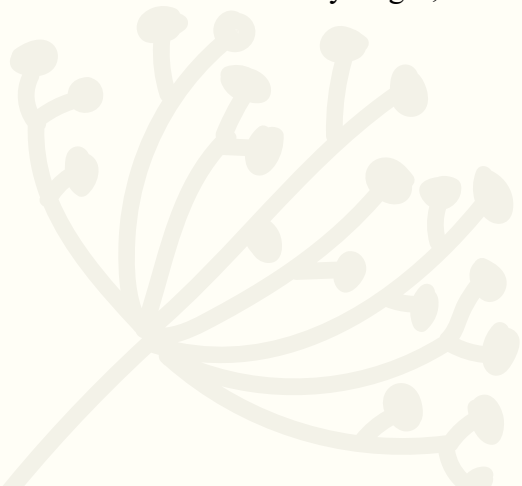
²⁶ *Hotline Miami* [Video Game]. (2012). Devolver Media



Chapter Four

Environmental Designs

Once the basics of 2D and pixel art were established, it was time to focus on the overall game environment theme. There are endless options of potential themes, places, times, and cultures to research and implement inspiration taken from them. This choice had to be made as a team since this dictates the entire game feel, aesthetic, and eventually game mechanics. My original source of inspiration for going about deciding on influences came from the 2016 *Inside Star Wars and the Power of Costume* exhibit that had a live showcase in Denver, CO. This showcase told “the story of the creative process from eclectic inspirations to physical manifestation” of the costume and character design in the timeless movie series *Star Wars*. (Baver) While walking through the exhibit, I saw concept artists’ sketches that made their way into physical products all the while taking inspiration from all different cultures, time periods, regions, and materials. “It was important for Drake to trace back the cultural influences that combined to make pieces at once familiar and wholly unique.” (Baver) I was attracted to the idea of having a wide cast net of influence and cultural backing. Even though I may return to this kind of model someday, I decided for now to focus a little more on a Scandinavian theme due to the complications that arise when one takes aesthetically pleasing ideas from cultures and may unintentionally participate in cultural appropriation. Cultural appropriation is the inappropriate adoptions of ideas, practices, ect., of a culture by members of another. Even though I don’t have any ill intentions, adopting other ideas takes research, time, awareness, and finesse that I didn’t have a budget for within my project schedule window. Since this project is still in its early stages, I decided to go a bit deeper in one area of focus rather than many.



[fig 15.Pixel Art house for Redstone Hollows]



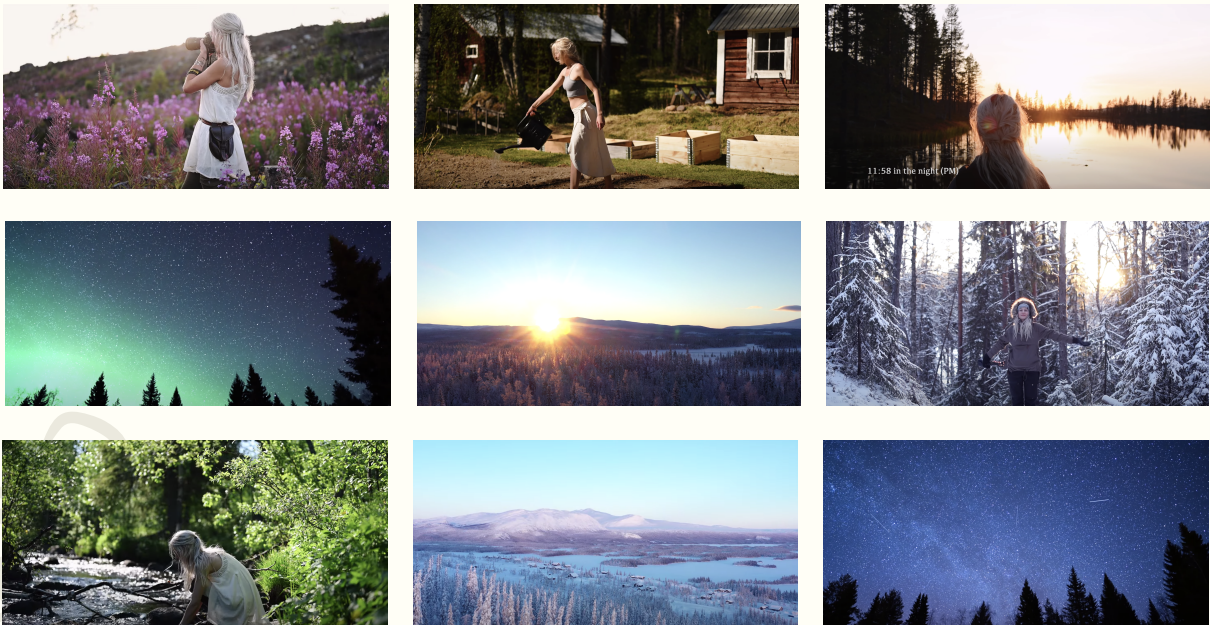
↑
scandinavian style chicken coop

My initial interest in Scandinavia was particularly sparked by Jonna Jinton.

Jonna Jinton is a Swedish artist, filmmaker, musician, and content creator who lives in Northern Sweden. She shares content on primarily Youtube and Instagram about painting, Swedish nature, ice baths, kulning (nordic hearingcalls), and overall glimpses of her everyday life. Jinton’s content held

inspiration for me for many reasons. The landscape and natural colors that occurred in Northern Sweden were spectacular. Many of the shots she has shared in videos or photographs contain the analogous color palette that I found

inspiration in, from other sources mentioned earlier in this paper.



[fig 16. Screenshots from Jonna Jinton’s Youtube]

Along with the pure visual aesthetics, the type of foraging and plants mentioned had attractive names, physical appearances, and uses. Some particularly fun plants mentioned were Cloudberries, Bog Bilberries, Lingonberries, Arctic Cotton Grass, Alpine Mouse ear, the list goes on. Jinton also covers a very unique aspect of light native to the very northern part of the world; the midnight sun and eternal night. The midnight sun is when the sun is up 24 hours a day, creating the illusion that the day never ends and it’s the exact opposite for the eternal night.

cloudberries



[fig 17.Pixel Art berries for Redstone Hollows]



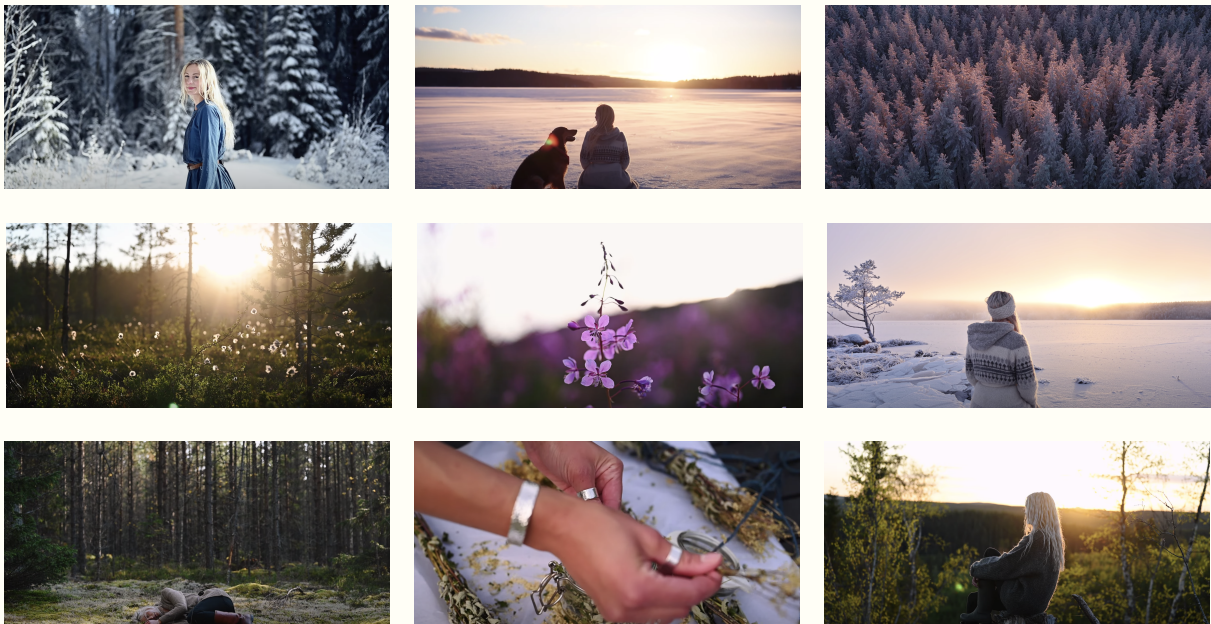
[fig 18. Screenshots from Jonna Jinton’s Youtube]



[fig 19. Pixel Art house for *Redstone Hollows*]

After hearing about this unique experience to those who live in high northern latitudes, I thought it would be an uncommon unique detail to add to parts of *Redstone Hollows*. This could heavily influence future color palettes as well as level designs as the game progresses. Scandinavia's lighting is another key reason that the ideas of spirits, fae, and magic were so prominent within their mythology.

After these choices were made, it became easier to design environmental assets, building designs, and even character designs. Even though the design inspirations were taken from different parts of Scandinavia or subcultures like the indigenous Sami people, they are all under this unified theme. As mentioned before, this scope of influence could potentially grow as the game progresses and when there is more time for research and appropriate cultural integration. As for now, the Scandinavian theme provides an in depth and interesting foundation in which to build *Redstone Hollows*.



[fig 20. Screenshots from Jonna Jinton's Youtube]



Chapter Five

Process, Drafts, Reality, Oh my!

So what does the process for actually stitching together this project look like? Well initially, the whole process started with inspiration from other games developed by indie studios or even better, solo developers. The question of, “I’ve always wanted to make a game, so why not me?” began to arise. After deciding that we both indeed did want to make a game and had the complementary skill set of Chris in software and mine in design and art, we began by dissecting media where inspiration was found. Since our main sources of inspiration were explained in an earlier chapter I’m not going to repeat them here. (See Chapter 2)

How our usual process starts is through our shared kanban board on *Notion*²⁷ where we keep references, write notes, and split up work under our in progress calendars. From there, I will make drawings in Aseprite using references from multiple sources, editing as I go. I’ll then consult Chris on how layers and animation loops should be labeled and divided before uploading assets to our shared drive. From there Chris will take what assets I’ve made and import them into Unity. After assets are imported, he programs them into our game. However many times, he has me make changes to the asset or it helps us realize what has to be done next or done better the next round. It’s a large cycle of pulling from sources of inspiration, creating an asset/vision, testing it in game, making revisions, testing it again, and then starting the cycle over again. It is slow and messy, but in the end, it pays off seeing everything come together in an interactive world we’ve created from scratch.

*Example villigar
pixel art designs*

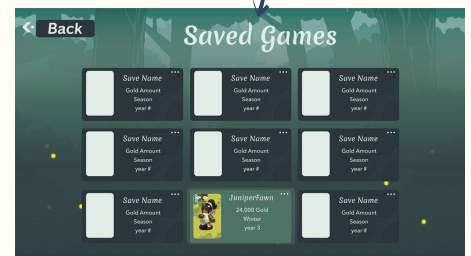
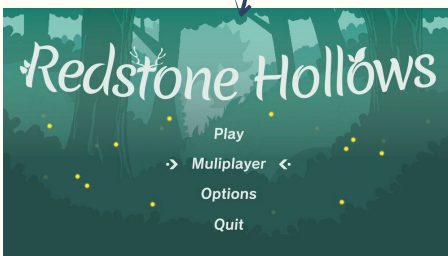
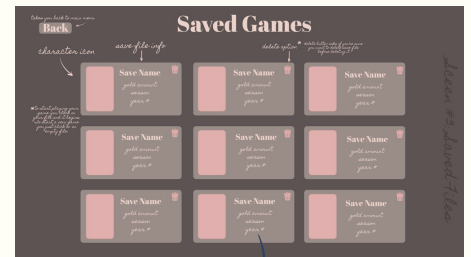
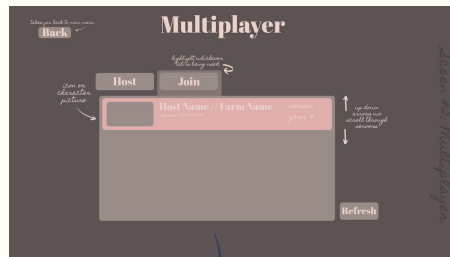


[fig 21.Pixel Art characters for *Redstone Hollows*]

²⁷Notion.so -- an all in one workspace and documentation website/tool

This process, however, has gotten a bit more complicated as we have moved through drafts. It's no surprise that as we progress in making this game, our understanding of game development and best practices has matured alongside it as well. That is why, at the beginning of the year, we stopped working on an old draft of *Redstone Hollows* since the code structure wasn't up to par to efficiently support a large game. Chris and I also agreed that an important aspect in our game was multiplayer which is required to be included in your code from the very beginning. After deciding to start a new draft, Chris had to take a month figuring out how multiplayer works in a small side project. Once the basics of multiplayer were working, we cracked down on creating our latest draft of *Redstone Hollows* in Unity. Although desirable, once this transition was made, it has slowed down the process of adding new visual assets to the game. Not only are we implementing better coding practices and naming conventions with art assets, but we are also navigating the new realm of multiplayer and how making server vs local function calls can affect game play.

Initial UI sketches



[fig 22. Vector based UI for *Redstone Hollows*]

Frist draft of UI

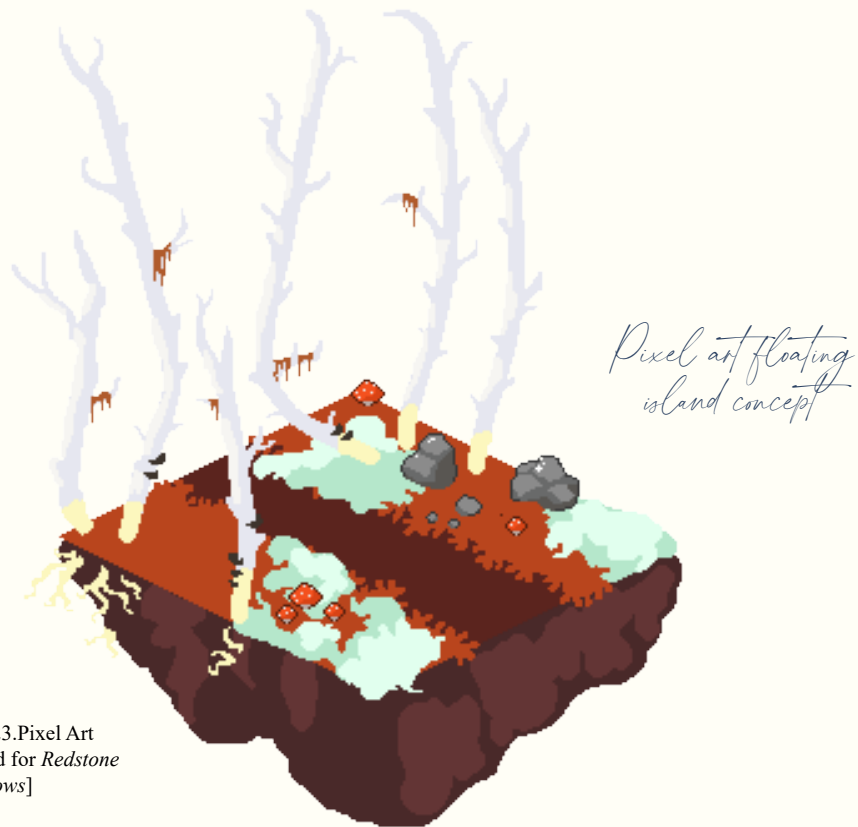
Having a two person team has both its advantages and disadvantages when it comes to game development. Disadvantages may seem obvious when it comes to the overall workload and all the different hats we must both wear to make this work. Traditional game studios - for this example let's think bigger than indie studios - have a different person for each aspect of game development; UI/UX designers, software developers, animators, modelers, marketing teams, concept artists, ect. Being just Chris and I, we have to be able to be flexible in our roles and be able to take on the responsibilities of many different roles that building a game requires. This can take away that idea of specialization in one role, but does teach us all the ins and outs of the others. The term “full stack developer” mentioned earlier comes back around: knowledge in all the fields. Which leads into the positives of having a very small team working on this project. The versatility of skills that you learn is unlike anything else I've worked on in the media production field. Another advantage is that there aren't “too many cooks in the kitchen”. I don't have to wait to get an opinion on a design change from 30 different people and we can give each other direct feedback about changes or what we need. Of course, this can lead to the argument that only having one (or in this case two) perspectives can lead to a narrow scope of view of the game world and project overall. To combat this, I've been working with a professor from CU Boulder, Tara Knight, for an outsider's perspective with industry experience and a background in media production. She's been giving direct input as well as giving me sources to look at for research or inspiration that I had never considered or heard of prior. Another source in which I get input is by Twitch. Twitch is a live streaming platform traditionally used by gamers, but now has picked up more traction with other content creators and stream styles. I livestream two days a week and one of those days I do art for *Redstone Hollows*. I have a few regulars and some new faces at times that give me ideas and live feedback on designs and art. Having other insight and input into my work has only strengthened my concepts and helped me open my mind to new formative ideas for development.



Chapter Six

Conclusion

The undertaking of creating a video game is significantly more challenging than the layman may expect. It is the conglomeration of nearly every artistic form brought together as an interactive media piece. As *Redstone Hollows* emerges from its research and early development phase, I hope to see these ideas be the foundation in which the rest of the game builds on. Through looking at inspirations, to technical decisions, to environment and character design, to the endless drafts, this journey is just beginning. Someday I hope to create a community that will enjoy and foster a love for the game and world we create. A couple million dollars wouldn't hurt either.



[fig 23.Pixel Art island for *Redstone Hollows*]

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