

Skyrim 2D

Intro

The Elder Scrolls V: Skyrim is an open-world action RPG first released in 2011. Since then, it has become notorious for its rereleases, and as such is available on essentially every major platform multiple times over. It is a sequel to Oblivion, taking place 200 years after the events of that game, and is set in the province of Tamriel of which the game is named – Skyrim. You play as the Last Dragonborn – a mortal with the soul of a dragon – a hero who was prophesised to appear alongside the return of the first dragon, Alduin. Unfortunately, Alduin, also known as the World Eater, is hell-bent on doing just that, and it's up to the Dragonborn to stop him.

The gameplay of Skyrim is varied, involving fighting, questing, delving into dungeons, slaying dragons, casting spells, smithing weapons and armour, mixing potions, creating a house, adopting children, and a fair bit more. That's without even mentioning the numerous storylines separate to the main quest, such as the Civil War story, the Dawnguard and Dragonborn DLCs, and the quests involving the game's factions such as the Companions, the Dark Brotherhood, the College of Winterhold, and the Thieves Guild.

Todd Howard, the game's director, has a specific quote relating to Skyrim associated with him:

"See that mountain? You can climb it."

While he seemingly didn't say those exact words, he does echo the sentiment during early Skyrim gameplay showcases, mentioning how the mountains aren't just for verisimilitude, you can scale each one if you so desire. Having the ability to go anywhere and do anything you want isn't exactly unique to Skyrim at this point in time, but back in 2011 it was one of the first games I'd played that gave you the freedom to adventure through and explore such a vast, immersive world.

Like with my previous adaptation, Subnautica 2D, Skyrim being in first-person (mostly) goes a long way towards immersing players, since you're experiencing the world through the eyes of the Dragonborn. Since 2D is less immersive in this respect, due to the viewing angle and lack of free camera putting physical and emotional distance between the player and the Dragonborn, we'll have to find unique ways of achieving a similar sense of adventure.

How could it work?

My idea for adapting Skyrim into 2D is to make it into a top-down action-adventure game – think 2D Zelda titles, just with less puzzles and more fighting, alchemy, and thievery. I actually chose Skyrim specifically as I thought it would work in this format, and I also wanted to tackle a big game for my final adaptation. I also want to specifically go for the "HD-2D" aesthetic. I'd say my biggest inspirations for these choices are The Legend of Zelda: Link's Awakening remake, and HD-2D games in general, such as the Live A Live remake.

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Screenshot from Link's Awakening (Switch)



Screenshot from Live A Live (Switch)

The Gameplay

Skyrim is a huge game, meaning there's a lot of gameplay elements to think about. Conveniently, the game has 18 skills which cover almost all the gameplay. Each of these skills fits into one of three categories based on guardian signs, these being the signs of the Mage, Warrior, and Thief. These are also traditional role-playing class archetypes. The skills are as follows:

Mage skills: Illusion, Conjuration, Destruction, Restoration, Alteration, Enchanting

Warrior skills: Smithing, Heavy Armour, Block, Two-Handed, One-Handed, Archery

Thief skills: Light Armour, Sneak, Lockpicking, Pickpocket, Speech, Alchemy

These skills level up when used, which improves your proficiency in the skill (e.g. damage from specific weapons increases, armour rating for certain armour increases, picking pockets gets easier, etc.) and also contributes some exp to your character level. When your character level increases, you can choose a perk in one of your skills, as long as the individual skill's level is high enough.

The main gameplay loop, when simplified, essentially consists of exploring (guided by a quest or on your own) discovering a location, fighting enemies (raising combat skills) and finding loot, returning to civilisation and selling/smithing/enchanting/doing alchemy (raising non-combat skills) in order to upgrade your character with more gear and equipment, before heading out exploring again. At any point in this loop, you might receive another quest, stumble upon a random encounter, or find a new location you weren't initially headed towards which most often leads to more discoveries, more enemies, and more loot. All along the way, your character is getting increasingly more powerful. This gameplay loop can stay the same in Skyrim 2D – it's not the loop that requires changes.

Essentially, the gameplay that needs changes relates to the skills that are based on interacting with either the world, or entities/object other than the player. Skyrim is a first-person game. You can switch to third-person, but it makes gameplay more awkward to the extent where there are numerous mods available attempting to 'fix' the third-person mode. For this reason, I'm going to talk exclusively about first-person mode. Since the game is played in first-person, you experience the world and interact with its inhabitants by rotating the camera, looking through the eyes of the Dragonborn. The crosshair in the middle of the screen lets you aim at whatever you're interacting with, whether it's a locked chest to pick, a shopkeeper to start a conversation with, or a bandit to smack with a mace or shoot with an arrow.



Skyrim 2D on the other hand is a top-down game. Sure, we still experience the world through a camera, but that camera is floating some distance from the Dragonborn and can't be rotated (at least not in the way a first-person camera can – more on that later). There's not even a crosshair in the middle of the screen, as that's where our playable Dragonborn is located. So how do we interact with the world without rotating to face the object we want to interact with?

Well, certain things can be interacted with based on proximity, which works well for enchanting, smithing, lockpicking, pickpocketing, and alchemy, due to how all the gameplay related to these skills is performed by being in a specific location (such as next to an enchanting table, locked chest, or NPC) and pressing a button which takes you to a menu where the gameplay takes place. This works for other proximity-based elements such as activating switches and levers, opening doors, speaking to people, etc. Moving over to these objects and areas will be controlled by WASD on PC, and the left analog stick on console.

Melee combat, and spells which affect only a short distance away from the Dragonborn, can work in a similar way: face the enemy you're attacking, and if they're in range they (or you) will be able to be hit. Think of a 2D Zelda game: you press a button to swing your sword, and it'll damage an enemy if they're in range – simple enough. Combat animations will need to be slightly exaggerated though, in order to make room for dynamic reactions such as blocking.

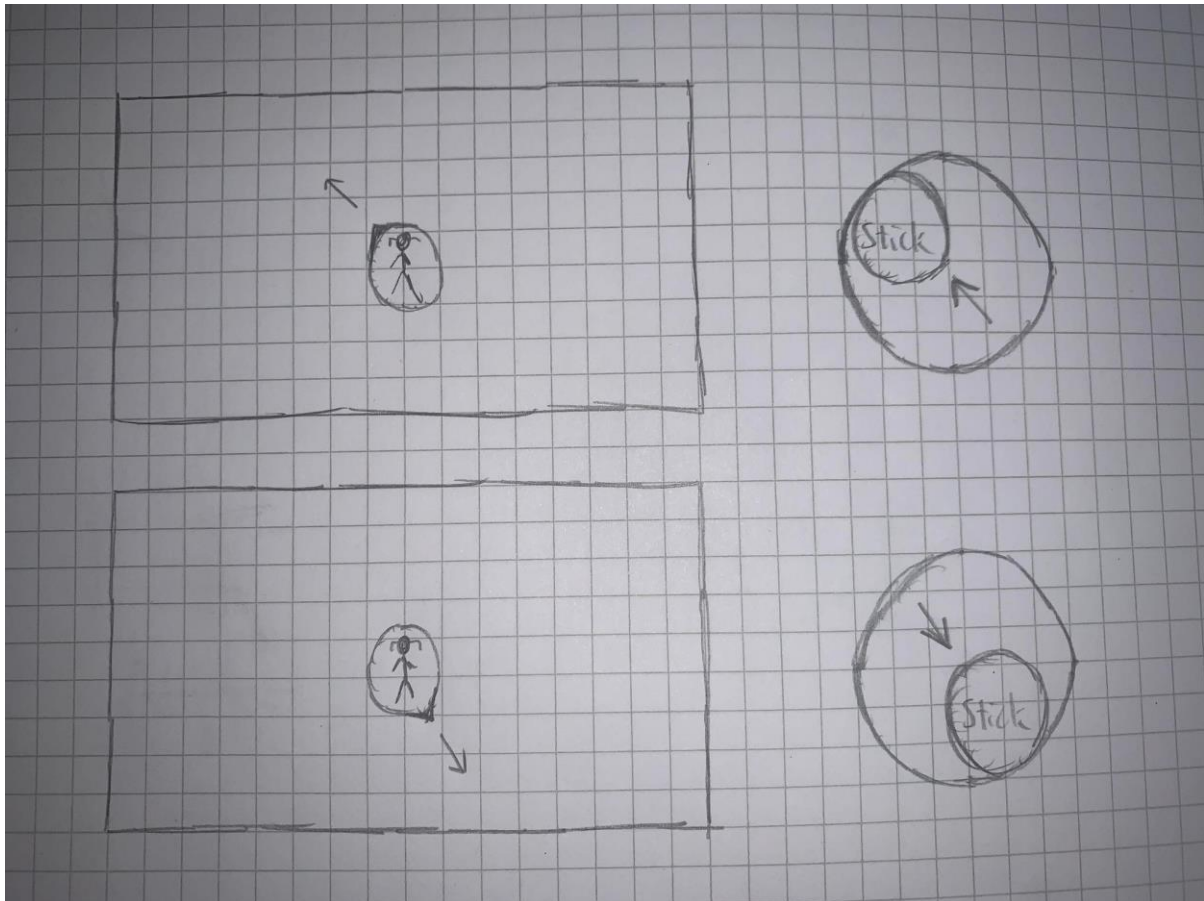
There are a few issues with this approach, though. Firstly, certain areas may have several interactive objects in a small space, especially when you consider NPCs walking around on their own. How does the game know which one you want to interact with? Additionally, this approach doesn't let you continue to attack enemies as you back away or strafe around them. This isn't completely necessary, but it becomes a larger issue when you start to consider ranged combat.

Ranged combat in Skyrim includes archery as well as spells which are cast on objects which aren't the Dragonborn, such as the world, or enemies. It also includes the Dragon Shouts, which are essentially also just spells. The issue here comes with how instead of just facing a general direction, these interactions require precise aiming, particularly archery. Of course, we can have it so the spell or arrow is fired in the direction the Dragonborn is facing, but this still lacks the precision of aiming with a crosshair. Additionally, this doesn't allow for aiming while standing still, since the direction faced is changed with movement – which once again means we can't fire a projectile in one direction while moving in another. There's also the issue that since we're using 2D sprites for characters, we'd need new animations for each direction we want the Dragonborn to be able to face, which only increases as we account for more and more directions. This increase in sprites then goes further when we account for all the possible actions, armour pieces, weapons, spells, etc. The more precise we want the aiming, the more sets of animations we need, and even then, it might not be easy to work out exactly where your projectile will end up. I think there's a more streamlined option.

For the PC we can solve this by adding a cursor to the screen. This allows us to aim with the cursor and cast a spell or shoot an arrow towards wherever the cursor is located. That was easy! This also works well for interactive objects, as a click can be used to interact with them, given you're in range. Like I said though, that's just for the PC. I'm going to be creating the demo for the PC so I could stop there, but I think devising a solution for consoles is important especially considering the game is notoriously available on basically every platform at this point. So, what do we do?

Well to start with, it's the standard now for every console's controller to have two analog sticks – this is crucial to my first idea. Some games let you control an on-screen cursor on maps or menus using one of the sticks – Skyrim is one of these games. While this definitely works, it's not a perfect solution. The main issue is how in order to achieve the same level of precision as a mouse, the speed at which you control the cursor has to be brought right down, as making it too sensitive makes it way too easy to overshoot where you want it to be.

Instead, I think we could use the right analog stick to control the rotation of a pointer which shows where projectiles will be fired. Here's a quick diagram of what I mean:



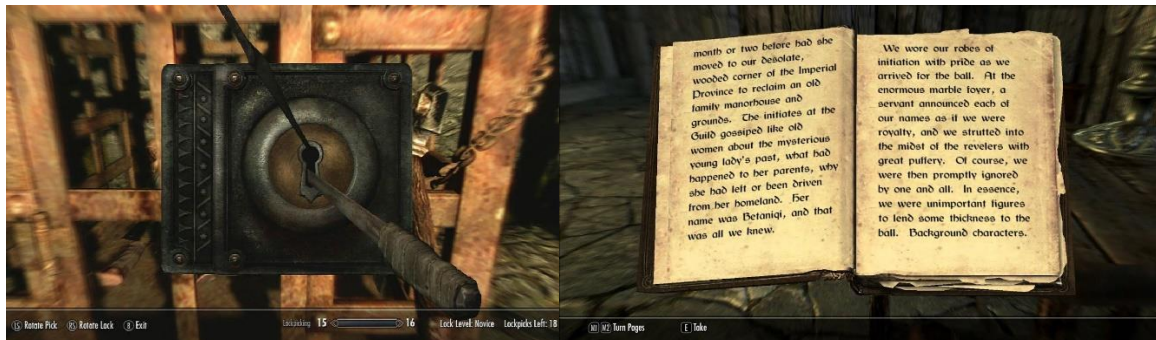
Originally I didn't think a pointer would be necessary as there are plenty of twin stick shoot 'em up games such as Enter the Gungeon where you shoot in the direction the right analog stick is pointing. However, with games like that, you can tell where you're aiming based on the constant stream of bullets. This doesn't really work for drawing an arrow and lining up the shot – we need to know where the arrow will go before we fire it. The pointer would also work for interactive objects, just point the pointer towards what you want to interact with and as long as you're in range you'll be able to do so.

There is another way the combat issue could be solved: targeting. Elden Ring is a good example; by clicking the right stick, you can lock onto an enemy, and you can change which enemy is being targeted by pushing the stick in their direction. This would work well for combat – as it would allow you to shoot and slash with ease without having to worry about aiming at all – but not necessarily for interacting with objects. You wouldn't want to have to deal with accidentally targeting a chest, door, and lootable corpse before finally landing on the enemy you want to take out. A way around this though is having the targeting only work on NPCs, and interacting with objects can remain proximity based.

I like both of these ideas, but both have drawbacks. An on-screen pointer adds clutter to the UI. Targeting can make it feel like you're not the one doing the work – lining up a shot with an arrow yourself is very satisfying especially on moving targets. Deciding on one approach would probably usually have to be done through playtesting, but since Skyrim 2D is scaled down (and also hypothetical) we can afford to go for the accessible approach, and have them both as options. Nice!

Most of Skyrim's puzzles revolve around interacting with objects; many dungeons have variations on Simon Says type puzzles where you have to spin columns with emblems of creatures on them to

match the same order of emblems found nearby. Any piece of gameplay where you interact with an object can be translated into 2D using the methods I've detailed above. Sometimes the way you interact with objects is by attacking them – the same applies here. There are also the repeated Dragon Claw puzzles which are similar to the column puzzles – at some point you'll obtain a sculpted dragon's hand made out of varying materials including gold and emerald, upon which there are a sequence of, once again, creature emblems. These claws can be used to open special doors in dungeons which require rotating rings on the door to match the emblems on the claw. These doors (or more accurately, the emblems on the doors) would be too small to see from the top-down perspective. A solution to this is making game switch to a scaled-up view of the rings. Lockpicking and reading books and notes also takes this approach, so it won't feel out of place.



The claw doors being too small to be seen from the top-down perspective has brought another issue to my attention though. Skyrim, no matter where you look, is absolutely full of *stuff*. Houses, caves, even forests are littered with items that you can collect. These items include gold, jewels, weapons, armour, regular clothes, potions, food, crafting ingredients like iron ingots, alchemy ingredients like flowers and insects, as well as a plethora of miscellaneous objects like plates, bowls, cutlery, pots, children's toys, and even human skulls. These objects, while often found in chests, cupboards, and on dead bodies, are also commonly found just lying on the ground or on a shelf. They are also actual-size, relative to the people in the game, meaning that some of them, particularly things like single pieces of gold, are miniscule. The issue here is that to pick them up, in the original game, you simply aim your crosshair at them and press the interact button, which, as I've discussed, doesn't work the same in Skyrim 2D, especially because they'll be super small on-screen.

Some games (including 2D Zelda games) let you pick up items by simply walking over them. This is the simplest approach, as it wouldn't mean having to aim the pointer at a super small object to pick it up. However, items in Skyrim have weight, meaning you don't want to be picking up everything or else you run the risk of becoming over encumbered, which greatly reduces your walk speed, and prevents you from sprinting and fast-travelling. Objects having carry weight is good for immersion and role-playing as it adds a level of realism. It also gets you to engage in the stamina mechanics – increasing your stamina when you level up not only lets you sprint longer, and use more power attacks, but it increases how much weight you can carry. Additionally, it's good for balancing – you have to manage your inventory and can't just pick up everything you come across, and since everything can be sold, this limits the amount of gold you can make, which then limits how many healing items and other items you can buy.

Gold doesn't weigh anything, though. To add to this, there's not really any reason you wouldn't want to pick up gold – there are no repercussions. For this reason, I think making gold collection automatic is a good decision. This works well for gold in the overworld as well as gold on enemies, which also means you don't necessarily have to stop and loot every enemy you kill, which is useful.

Arrows also don't weigh anything, however it might make more sense to only automatically collect arrows you fired yourself, so non-archers don't get their inventory too cluttered.

When it comes to most of the other objects, including but not limited to weapons, armour, potions, and ingredients, there are numerous ways to collect them in the original. Some can be collected from objects such as chests and the corpses of slain foes. Some can be collected by interacting with bushes and creatures like insects in the overworld. Then there are the times where items can be found by themselves on shelves and desks, and on the floor. The problem of some of them being too small to see properly and requiring too much precision to interact with using the pointer can be solved by exaggerating the size of items slightly. Since they'll be 2D sprites anyway, we'll have to make them slightly oversized to match the pixel density of creatures and people, which, along with the graphical style, should help them stick out in the overworld. Either walking on top of the items, or aiming the pointer items, will prompt an interact command, allowing the item to be picked up.

This still doesn't really let us pick up items on shelves, especially when the shelves have multiple layers. Instead, we can make accessing a shelf or desk similar to accessing a chest, done through menus. Since cupboards, barrels, wardrobes, and other kinds of storage also use this approach, it won't stick out too much.

There's another important aspect of gameplay I'm taking from 2D Zelda games as well: layers of verticality. Most top-down 2D Zelda games use clever sprites and perspective tricks to give the impression of vertical movement and elevation. Gameplay-wise, this is functionally the same as using real verticality, which is what we're doing. The important part is that in-game, the player character is treated as having moved to a different layer of verticality – we're just achieving this effect with real verticality instead of perspective tricks and optical illusions. In classic 2D games, technical limitations (which necessitated graphics be purely flat) led to certain gameplay conventions – modern 2D games seem to be defined by how they stick to these conventions despite the games not necessarily needing to be purely flat anymore. I believe this is why people consider games such as New Super Mario Bros. and the Link's Awakening remake, to be 2D – it's the gameplay itself that's 2D (or at least functions in a way that classic 2D games managed to achieve despite technical limitations), just presented with graphics that allow for real depth. Anyway – back to jumping!

Some 2D Zelda games, such as the Minish Cap and the original (and remake of) Link's Awakening, make use of items which let the player jump. Much like with the layers of verticality, if a flat 2D game can achieve this effect, so can we. Instead of having a free jump in Skyrim 2D (which would push the boundaries too far in my opinion) I reckon we can have specific points in levels where the Dragonborn can perform a tightly controlled jump in a specific direction, but not have the ability to jump from one layer of verticality to another – except perhaps at certain points for certain puzzles. That way, the gameplay is still holding to the same conventions and limitations of classic 2D games. Every instance of verticality in Skyrim 2D would affect the gameplay the same if the game was built entirely out of flat sprites – the limitations are the same, we're just presenting the gameplay in a more modern way.

Another crucial part of the Skyrim experience is the dragons. The dragons are a pain to figure out, mainly because they can fly. This reveals a flaw in our aiming system, at least when in pointer mode: we can only hit enemies with projectiles if they are on the same vertical plane as us. We've partially solved this already since we're using several vertical layers of terrain that can be used by both the Dragonborn and NPCs. Dragons though? I'd really like them to be properly flying through the air – which makes this quite the conundrum.

Inspiration for how to solve this problem came from a rather unlikely place: Animal Crossing. The Animal Crossing series is one that in my opinion blurs the lines between 2D and 3D. The graphics are 3D, but the gameplay itself has a lot of the same restrictions and limitations as classic top-down 2D games, in a similar way to how New Super Mario Bros. stays true to the conventions of completely flat 2D platformers despite having 3D graphics. It's these limitations that I find to be the most interesting part, as they are what lead to the most creative design decisions when it comes to adapting a game into 2D – navigating these restrictions is what my adaptation are all about. Digressions aside, Animal Crossing features floating balloons which have presents attached to them, and in order to get the present, you need to shoot down the balloon with a slingshot. Animal Crossing resolves the issue of not being able to see the sky when in top-down mode by having a mechanic that lets you temporarily tilt the camera. Here's some screenshots:



The present is off screen, but a shadow can be seen next to the player's head, and a wind sound can also be heard, indicating it is nearby



By tilting the camera, you can fully see the present, and you can shoot it with the slingshot

I think a similar mechanic would work well for Skyrim 2D. Instead of just tilting the camera slightly though, I think switching to a full-on sidescroller view, complete with movement being restricted to only along the horizontal plane, is the way to go. There are numerous reasons for this. Firstly, too much freedom of movement blurs the lines between 2D and 3D a little much for me, and secondly, shots would still be hard to line up if the Dragonborn (and creatures) could move forward and backward in sidescroller mode. This means that when you switch to sidescroller mode, enemies on your vicinity will have to move to join you on your horizontal plane. This doesn't have much application in regular fights, only really having advantages when fighting dragons. Since this means it probably won't get much use aside from when dragon slaying, it should make the dragon fights stand out more as unique, which is fitting since they're such a focus in the game. This solution works thematically, as well as working with our aiming modes, as dragons can be targeted, and our aiming pointer will let us aim in the sky.

This is also somewhat of a solution for another issue I was having when adapting Skyrim into 2D. One of the wonders of Skyrim is being able to look off into the distance and see for miles. The grassy plains and jagged, snow-covered mountains, many of which are strewn with ruins built from Nordic and Dwemer architecture, are a sight to behold even today. When I first played the game back when it released, it was the first time I'd really appreciated being able to look into the horizon and explore and adventure as far as I could see. Many games have done this since, but Skyrim is the one that sticks in my mind. Having a sidescroller mode makes looking into the horizon possible in Skyrim 2D. While this aspect is certainly an advantage of creating a fully 3D game with a fully controllable camera, this is a 2D fix that I'm pretty happy with. The distance from reality that comes from the perspective as well as the use of 2D sprites means immersion through realism is low on the priority list as it is. This solution lets me stay true to the limits I've imposed on the game, while also maintaining the abilities to a) fight dragons, and b) gaze wistfully at the mountains – both of which spring to mind when I think of Skyrim.

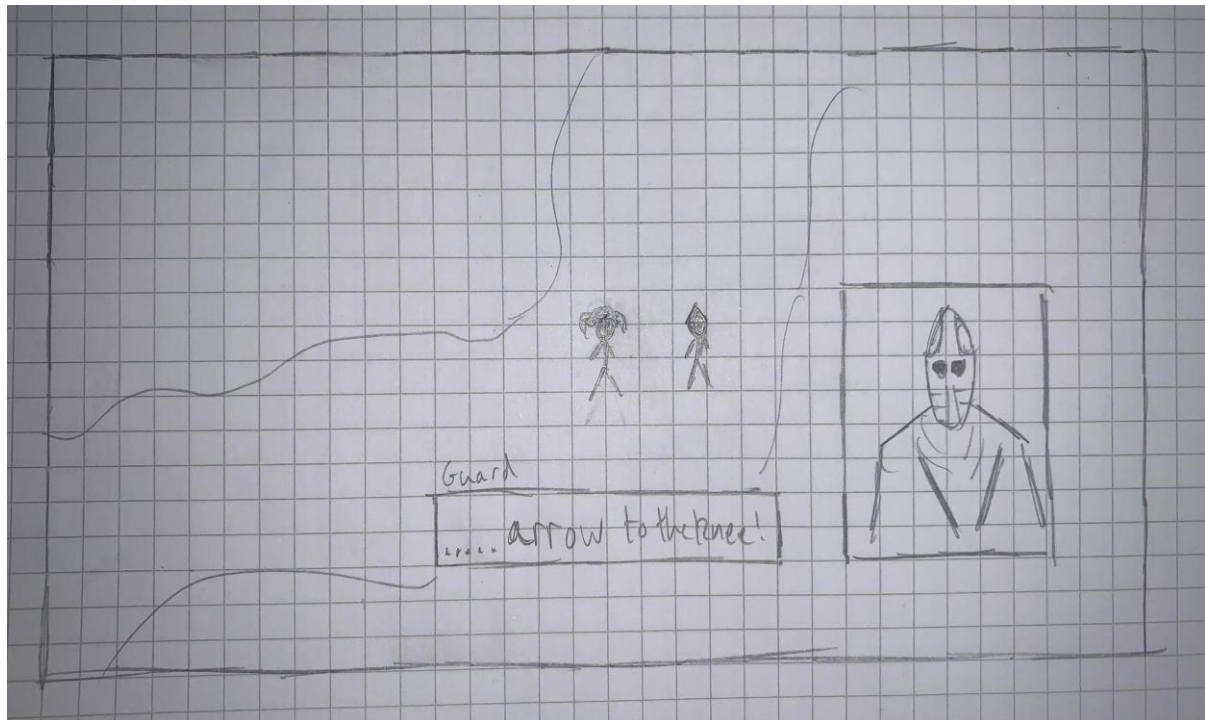
There's one more aspect of the gameplay we need to talk about: Skyrim's NPCs. The Elder Scrolls series – particularly Skyrim and Oblivion – have notoriously... goofy NPCs. The amount of YouTube videos showcasing funny interactions between NPCs is staggering. Whether or not these funny moments are intentional is another matter altogether – though it's hard to believe that the developers over at Bethesda had no idea what they were doing. It's not just one aspect of them that makes them so funny, but a combination of the script, voice acting, AI, and a hearty dose of bugs and glitches.

It's fair to say that in Skyrim the NPCs are a little toned down compared to Oblivion, but the feel is similar. The behaviour of the NPCs really contributes to the unique feel of the games – they simply wouldn't be the same without them, for better or for worse.

NPCs are different in 2D games, and a lot of the changes that need to be made involve changing what makes the NPCs stick out in the original. The AI will be less complicated, meaning there is less chance for unusual pathing mistakes. The characters are 2D sprites, meaning there won't be the same glitches with limbs. There's also much less voice acting in 2D games – it's difficult to think of a 2D game with voice acting, at least in a similar way to a 3D game. The 2D Fallout games have voice acting, but it's only in the talking head segments, not in the overworld. So, what do we do?

I think we should incorporate a little bit of voice acting. I don't want every single thing an NPC says to be voice acted, as since they're small sprites, it might be a bit confusing to have a load of random voice lines play with it being uncertain to the player who's even saying them. Voice acting should be reserved for when you're specifically engaged in dialogue with an NPC. When you specifically

interact with and talk to an NPC, a Stardew Valley style dialogue box could come onto the screen, complete with a more detailed pixel art portrait of the character. The text on screen in the dialogue box is what will be said by the voice actor. Here's a diagram of what it would look like:



Skyrim also has NPCs speak when you aren't specifically engaged in dialogue with them – usually just brief voice line. I don't think we need voice acting for this – as I said before, it might be confusing who's saying what. Instead, we can have text appear near them when they are in range, in a speech bubble of sorts. I think this compromise allows us to keep some of the charm of the original, with a bit of voice acting, and a lot of the script, without it getting overwhelming or confusing.

That just about covers it, as far as I can think. As I mentioned earlier, Skyrim has a LOT of gameplay elements. This gameplay takes place all over the world, including outside areas such as forests, tundras, and mountains, inside buildings and hideouts, and deep into caves, dungeons, crypts, and ruins. All of these places are neatly slotted into the world and its landscape. Which brings me to...

The Level/World Design

Skyrim has a large map, and I want at least *some* of that scale to translate into 2D. I found an interesting analysis of the map's layout in the YouTube video titled 'World Building – The Skyrim Map's aesthetic & form' by Stoneworks.

Here's the link: https://www.youtube.com/watch?v=kFCqxTUHO2U&ab_channel=Stoneworks

Stoneworks argues that the map works well because of how it is split into various areas using multiple overlapping dividers such as coasts, mountains, basins, rivers, and the in-game holds. Due to how these dividers overlap, the areas themselves are quite ambiguous, which makes them feel natural and realistic, whilst also being intentionally placed.

This intentional placing of environmental features, which also extends to buildings, ruins forests, lakes, and other miscellaneous points of interests makes it so wherever you are, in every direction there is probably something which grabs your attention and makes you want to explore. Also, while there are a few loose 'biomes' that I've mentioned previously, these fade into one another naturally.

However, not all of these points of interest are obvious from the in-game map, as they are often quite small compared to the scale of the whole map.

This approach works well for a 3D game. The naturalistic feeling of the map adds to realism which increases immersion, and the free camera is what enables you to look in every direction, notice a point of interest (which was intentionally placed by a designer to grab your attention) and make your way over to it, feeling like a true adventurer as you do.

Skyrim 2D does not work that way. Most of the gameplay takes place from a top-down perspective, meaning we can't rotate the camera to find points of interest. There's the sidescroller mode, but that just lets you look into the distance to the north of the Dragonborn – it provides a nice view of the horizon, but doesn't include a large number of the landmarks that will be present.

I keep comparing Skyrim 2D to 2D Zelda games, because gameplay wise they're fairly similar. A Link to the Past (which I'll now refer to as 'LttP') has a map which is much more grid-like in how it is laid out. Since you can't look around for landmarks, the in-game map is much more blatant about the points of interest – it's really hard to miss them. The map itself is almost like a large open dungeon, featuring both larger areas as well as maze-like regions. Through exploration eventually you'll hit an obstacle to cross which you'll need an item that can be obtained from a dungeon. Eventually shortcuts open up, making navigation easier.

I want to find a midpoint between these two approaches to open worlds for Skyrim 2D. I think keeping Skyrim's general layout but making the routes and areas slightly more grid-like and scaled down to accommodate the 2D gameplay is a good idea. Not too grid-like, but with clean enough lines to not be too visually busy and confusing. Additionally, we'll need to make points of interest stand out a little more on the in-game map, as we can't use the camera to look around and find them.

Both Skyrim and LttP have open explorable worlds with towns that blend seamlessly into the world, and dungeons which require you to go through a door or into a cave. In LttP, an exaggerated yet simplified version of the dungeon exterior appears on the world map, which doesn't account for the interior. This approach can also be taken with some of Skyrim's major cities (such as Whiterun, Windhelm, and Solitude) as they are walled off. This is how we'll get our eye-catching versions on the world map – we can use an exaggerated yet simplified representation to draw the eye. Once inside the LttP dungeon, it appears bigger on the inside, as is the case with many games, even the original Skyrim. This approach allows us to scale down the exterior of a city and load a larger area once inside, as to not clutter the overworld. This will also make it so the exaggerated representation isn't confusing, as once inside the city, the local map can be viewed.

Skyrim's local maps are much more detailed than the world map, and are accessible once inside a dungeon or city. To accommodate making individual dungeons more eye-catching, it might be useful to add an intermediate map (possibly a 'hold map', or even just a zoom feature) so we can include a representation without cluttering the world map, and possibly even show a better representation of the actual layout of the cities, depending on how zoomed in this map is.

Like I said, in LttP items acquired in dungeons are necessary to remove obstacles to your exploration, which can also open up shortcuts. These obstacles aren't present in Skyrim, and I don't want to add a load of arbitrary Zelda-adjacent items to the game, as I feel like it isn't in line with the spirit of the original – after all, Skyrim isn't a puzzle game. The obstacles you come across are more there to challenge your skills as opposed to fully block your progress, and most often come in the form of

bandits, beasts, or dragons. That's not to say there are no puzzles in Skyrim though – there are often puzzles found in dungeons.

Dungeons are handled very differently in Skyrim and LttP, both in layout and how the gameplay works. It's a long-standing criticism of Skyrim that its dungeons are linear. Many are challenging – and a decent few are fairly winding, particularly the Dwemer ruins – but it's true that in many cases it's fairly straightforward to get to the end, and many of the side doors and rooms are just rooms or cupboards that don't necessarily lead to any alternate routes, usually just treasure. There are a few puzzles to contend with, a lot of which involve matching symbols, albeit in a few different ways. There are a couple of other notable puzzles, such as logically working out button combinations, or sliding around pillars to line up a grid of energy, but none are too tricky, as like I said, Skyrim isn't a puzzle game. Most of the challenge of dungeons comes from navigating the terrain and the enemies in the best way for your specific character's skillset. This does make them feel more realistic though, as many of the dungeons were created and used by people. There are traps to deter outsiders, but many puzzles might stick out as being too 'gamey'.

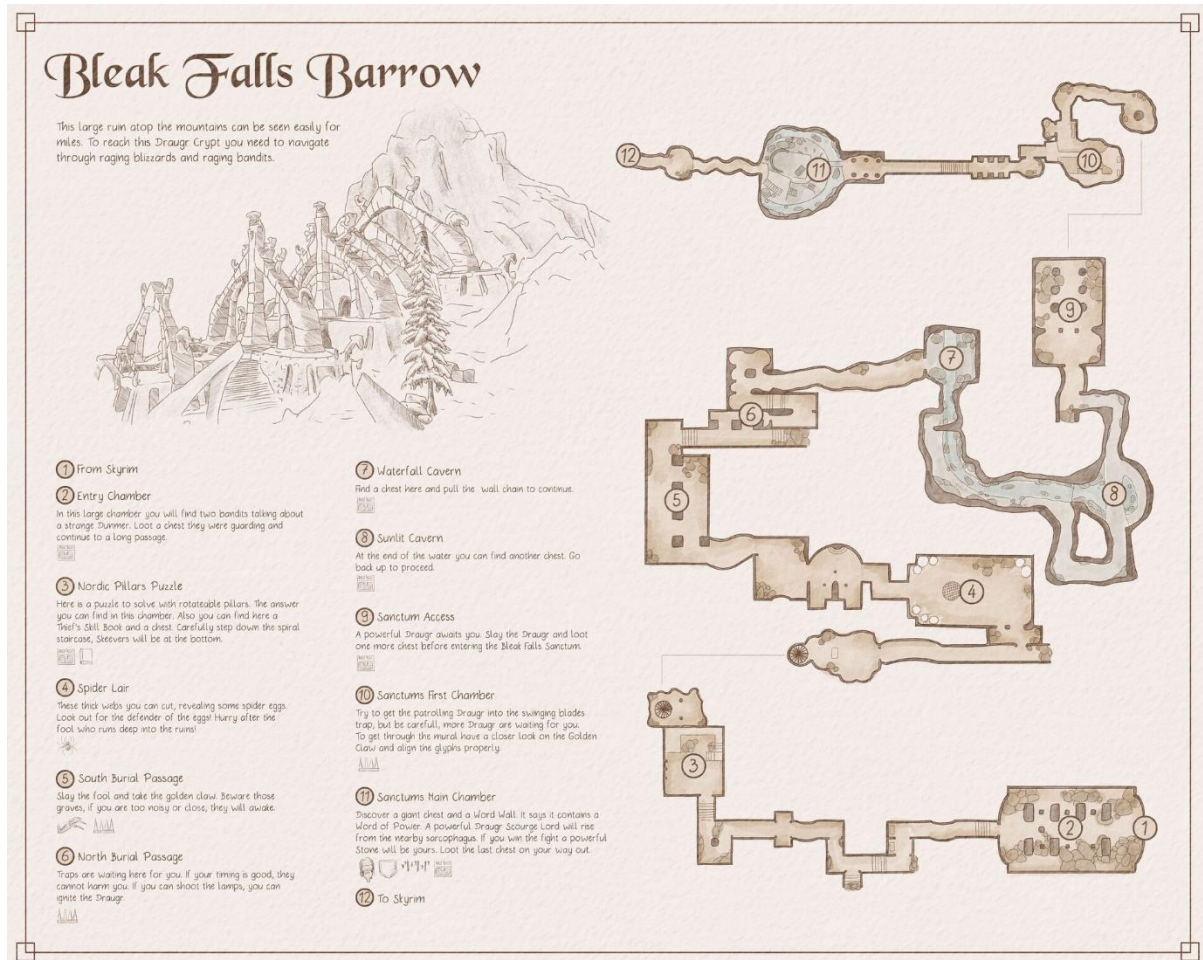
LttP dungeons, and most Zelda dungeons, are often a mixture of linear sections and non-linear sections, with some being only one or the other. There are also many, many puzzles to solve. Often, each room has its own puzzle to solve, which can range from lighting a torch, to placing a bomb on a moving floor at the right moment so that it detonates when it's near an enemy. Completing puzzles is how you unlock items which can aid your progression (such as the Hookshot which is used like a grappling hook) as well as many small keys. Sometimes there are far more keys to be found than is needed to complete the dungeon, most of which can be used to unlock side rooms and shortcuts.

In 2D Zelda, and LttP specifically, the dungeons are much like the overworld – grid-like. Often, you'll enter a room and the doors will lock behind you, only opening when you solve the puzzle or kill all the enemies. Each room is a puzzle unto itself, which makes the whole dungeon one large puzzle to be solved. Obviously, this is different to Skyrim, but the 'gamey'-ness works a whole lot better in 2D, as it doesn't take you out of the experience.

So, what do we do for Skyrim 2D? I think once again, a midpoint can be found. There's more of a focus on combat in Skyrim 2D, so we don't need the dungeons to be too confusing. This means I'm not going to add a bunch of additional puzzles – unless it makes sense of course. The dungeons do need redesigning, since many of them have varying levels of verticality and angled terrain – Skyrim 2D doesn't have this, only set levels of verticality, keeping it in-line with the restrictions of 2D (LttP also has verticality due to perspective tricks with the 2D sprites, so it's fair game). A more grid-like approach should make it simpler to keep track of vertical layers, but might also make it feel more linear due to the clean lines – for this reason we might need to add some alternate routes, but not necessarily massively consequential ones, to make sure story and discovery beats are still hit.

I'm going to redesign one of Skyrim's dungeons to give an example of how they will appear in Skyrim 2D. One of the first story dungeons in Skyrim is Bleak Falls Barrow – you're tasked obtaining the Dragonstone from deep within, as it contains a map of Skyrim complete with the locations of dragon burial grounds, which is useful due to how they're being risen from the dead at these locations. This is the dungeon I'm going to redesign.

Luckily, I've managed to find a beautiful recreation of the layout of the dungeon by Mirhayasu on ArtStation, complete with the main beats of the level:

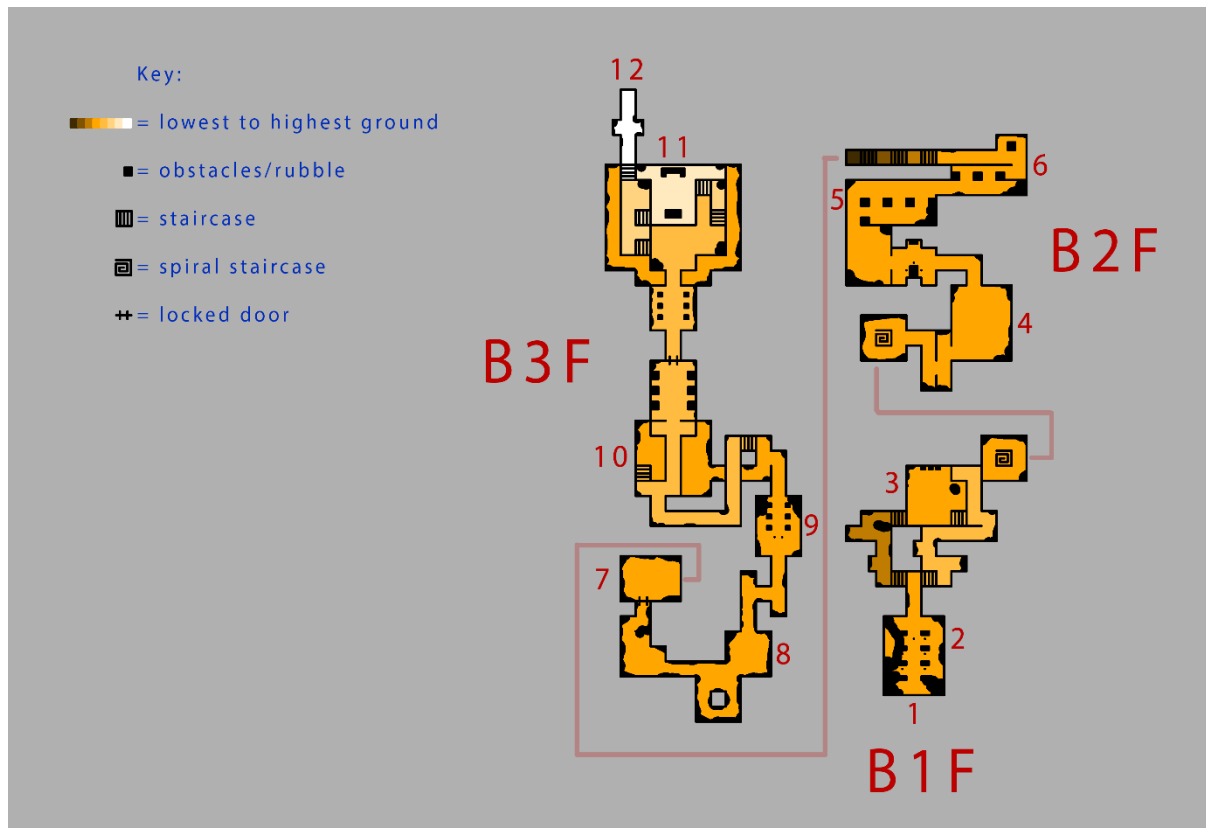


This map can be accessed at: <https://www.artstation.com/artwork/o2AJwL>

Having played through the game many times, I can confirm this map is accurate, which is why I'll be using it as a reference for my layout.

Here's the layout I came up with:

(cont. on next page)



The numbers line up with Mirhayasu's layout in the earlier image. I ended up taking a fair few layout cues from the original where it made sense, but focussed on making a couple of specific changes to the layout.

Firstly, I decided to make the layout a little more winding. In the original game, the player has the ability to control the camera and therefore where they look, and their rotation relative to the world. This freedom can contribute to players becoming disoriented, making the dungeon seem more confusing than they are when viewed on a map. In Skyrim 2D, the viewing angle is always the same, so making the map a little more winding makes up for the viewing angle being more consistent and straightforward.

Secondly, I added a couple of alternate routes. These routes always come out in the same room, but on different levels of elevation. This makes the dungeon feel a little less linear and gives the player more choice in where they go, while all the beats can still be hit, since they still come out in the same location.

Thirdly and finally, I had to rotate a few of the rooms, since the best viewing point of important elements of the map – such as puzzles and word walls – is when they are on the north wall. This also contributed to making the halls more winding, as this was necessary to ensure the rooms were rotated correctly. This method of making important elements of the map be accessed to the north of the player should also extend to exterior layouts, though to less of an extent, as having these elements spaced out in a dungeon doesn't appear as unnatural as having every single building in the overworld facing the same direction.

I'm happy with this layout as I feel I was able to keep enough from the original, ensuring the beats of gameplay are still hit, whilst also altering the layout so it makes more sense in 2D without also

ruining the pacing in the process. Now that that's sorted, it's time to talk about how the game will look!

The Visuals

Earlier in the document I mentioned how the graphical style I want to go with for Skyrim 2D is top-down and "HD-2D." This is a term which has only really cropped up in the past few years. Here are some screenshots from some games with the style so you can see it in action:



Screenshot from Octopath Traveler



Screenshot from the upcoming Dragon Quest III HD-2D Remake

The HD-2D aesthetic seems to mainly be defined by its use of 2D sprites for characters and creatures in a world built from 3D assets. I'm using this aesthetic for Skyrim 2D as it's a super modern and beautiful way of revitalising classic gameplay styles, 2D RPGs in particular. In addition to the 2D

sprites in 3D environments, HD-2D games often have dramatic lighting, as well as a camera effect for a shallow depth of field. Link's Awakening on the Switch also happens to have this camera effect. Very small objects in the real world, such as insects and raindrops on leaves, often appear in images with shallow depth of field as it's necessary for the camera to focus on such tiny things. Applying this to games makes the whole thing look like miniature dioramas, which works for Skyrim 2D as it is reminiscent of tabletop RPGs.

Link's Awakening, and other 2D Zelda games, were also the main point of inspiration for me choosing the top-down format. This style is great for dungeon crawling as it allows for layouts more akin to real-world spaces which can help when it comes to designing them as we're more familiar with the view – this also carries over to external locations.



Screenshot from Link's Awakening (Switch) which inspired both the top-down style of Skyrim 2D, and the depth of field effect

The original Skyrim's art style is essentially realism, or as close to realism as games could get in 2011. It's actually a lot easier to describe Skyrim's art style when you compare it to the style of the previous Elder Scrolls game, Oblivion. Here are some side-by-side screenshots, with Oblivion on the left, and Skyrim on the right:



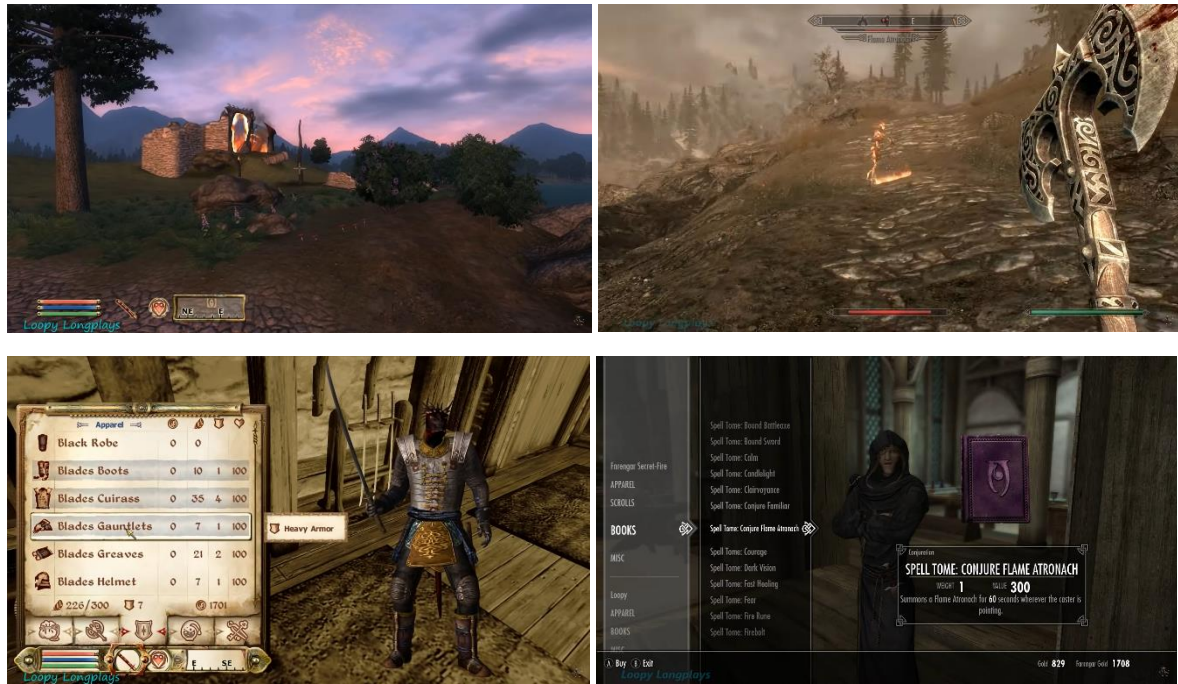


It's obvious that Skyrim is more realistic, but it's more than just the quality of the models and textures. Oblivion has a hazy, almost dreamlike and whimsical quality, whereas Skyrim is more down to earth, dirty, and gritty. The colours in Oblivion are a tad more vivid and fantastical, but Skyrim's colour grading feels both natural and dramatic, with a sharp contrast between warm, cosy, and inviting, and cold, harsh, and brutal. The upgrade in lighting quality between the two games also adds drama to Skyrim's environment.

I think these qualities make Skyrim feel unique despite similar styles being common in games. Therefore, we should keep the art style, which is possible since we're using 3D assets for the environments, which helps give the world visual depth. However, in keeping with the HD-2D style, I think we should make the lighting even more dramatic, as we're less focussed on realism anyway. This should help make up for the fact that we don't get to experience the impressive vistas in the same way. Additionally, the depth of field effect will blur the distant environment when we go into sidescroller mode, which works in our favour as it obscures what will be a fairly grid-like layout, leaving more to the player's imagination and letting them fill in detail themselves – another advantage of opting for a less realistic, 2D style of game. The HD-2D style adds some character and further depth while sticking to our restricted perspective.

I considered using 3D models for the characters and creatures to begin with – in a similar style to Link's Awakening – but using 2D sprites for them makes them pop and stand out from the environment. It's also an interesting style which once again leaves more to the imagination to the player. Since the representation is less accurate to reality, the player can project what they have in their head onto the 2D representation more easily, which is good for roleplaying purposes as it lets them fill in the blanks.

When it comes to the UI, Skyrim's UI and HUD is quite minimalist compared to Oblivion, at least for the artwork, here are some screenshots courtesy of Loopy Longplays on YouTube, once again with Oblivion on the left, and Skyrim on the right:



Oblivion's HUD elements are more colourful, shaded, and stylised to the point of being skeuomorphic, whereas Skyrim's are more about block colours, gradients, and straight lines, looking more like vector graphics. While I think Oblivion's has a bit more character, the simplicity of Skyrim's makes it easier to use. I think we should stick to Skyrim's style, with the same elements, but make them pixel art instead – this should add some character, whilst still not taking focus away from the world. The only real changes will be the crosshair, which for the PC is now going to be used as a cursor, and adding the pointer used for aiming on the console version. Additionally, we can remove the compass bar, as since we can't rotate the camera, north will always be to the top of the screen, south will always be to the bottom of the screen, and so on. Since in the original the compass bar is where quest markers (indicating the direction you need to be going to progress your current quest) reside, we'll need to move them. I think it makes sense for them to hover around the edges of the screen and move depending on your position – this is how they work on Skyrim's map screen.

The Sound

Skyrim's SFX are realistic, atmospheric, and punchy, and its music is just iconic at this point. The SFX are where most changes need making, so I'll talk about that first. It's not really the sounds themselves that are the issue - it's when they play. The range from which Skyrim's sounds are heard strikes me as being fairly close to reality, being heard from a distance that you would expect. This makes sense as you have a much wider view of the world in the original game, since you can control the camera. There's also surround sound that works relative to the Dragonborn's ears, the location that sounds come from changes all the time.

For Skyrim 2D, I think it makes more sense to only be able to hear what is on screen for the most part. This is to not be overwhelming, since we can't see as much of the world due to the perspective. This just entails shortening the range at which sounds can be heard, or at the very least, having a fairly close drop-off point at which they quickly fade. In some cases, though, like with the dragons, I think being able to hear them before they are on screen adds to the tension, so while the range should be shortened so we can't hear them from miles away, it should be long enough to still give that daunting feeling. I think it still makes sense to hear sounds in relation to the position of the

Dragonborn, just disregarding the direction they are facing, since otherwise sounds would flip from ear to ear at a rapid pace, which would quite frankly just be quite annoying and disorienting.

Then we get to the music. As I said, Skyrim's music is iconic, much like the music of previous Elder Scrolls titles. Pieces range from soft and atmospheric pieces that make you want to drop your quests and wander the wilderness, to dramatic battle music that hypes you up for taking on an onslaught of foes. Sometimes this kind of music doesn't work the best with 2D games which have less of a focus on atmosphere and immersion, and more of a focus on pure gameplay and fun. I've written about this previously in my Subnautica 2D adaptation document – here's an excerpt from it:

"Many 2D games take a more bombastic approach to sound – think of the expressive sound effects and catchy, prominent melodies of classic and modern Super Mario Bros. and Sonic the Hedgehog for instance, which go hand in hand with the playful vibes of the game. Additionally, these games aren't focussed on realism (which is part of the reason they work so well in 2D) so don't necessarily need to use music and sound to pull you into the experience – it's more to emphasize the fun. However, there are also those which stray from this approach at points to inject some mystery and even creepiness – Super Metroid is a good example."

Since we've made an effort to make Skyrim 2D more atmospheric than your average 2D game – not to mention the fact that Skyrim's music is inextricably linked to original to the extent where without it, it just wouldn't be Skyrim – I think we should keep it. Changing it would feel arbitrary, and as I've mentioned in other documents, I want to avoid arbitrary choices wherever possible, to make sure my projects are all deliberately and intentionally put together.

The Proof of Concept

Creating Skyrim 2D's demo was a lot of fun, partially due to the aesthetic, and also because I haven't made a top-down game before. Compared to the demo for Subnautica, I didn't actually have many issues getting everything working as intended!

Here's a YouTube link to a playthrough:

<https://youtu.be/Vu5ndJDmnz8>

And here are the screenshots. Once again, there isn't a particular puzzle or route through the demo, more just a small area to explore, and a couple of bandits to mess around with. Oh, and there's also an ambush from a winged beast – take a look:

(cont. on next page)



























So, let's discuss!

The Gameplay

I didn't include every aspect of Skyrim's gameplay in the demo – that would have been absurd – but there's an example of basically every decision I made, and it all works as intended! The specific gameplay features in the demo include simple sword combat, casting spells (complete with working Magicka meter), using the Unrelenting Force shout, switching to sidescroller mode, and fighting a dragon in this mode, which does in fact make the encounter stand out from fighting regular enemies while also actually letting you hit the dragon. It also lets you see the mountains in the distance which opens up the world!

There's also the cursor which you use to aim in both top-down and sidescroller mode, which makes casting spells a breeze, and isn't jarring when you switch between modes. It also lets you cast in multiple directions no matter whether you're stood still or on the move! Since this demo is on PC, as I mentioned earlier, I didn't include the aiming pointer that would be in a full console version, but I still stand by that solution.

I also still stand by my decisions regarding the items in the game, despite not including them in the demo. The way the demo turned out makes me confident that items would stand out and be simple to pick up due to their sprites, and that accessing containers would also be simple due to the ease of using the cursor, and the console pointer.

The Level/World Design

Like with my Resi 2D and Subnautica 2D demos, the demo features more of a burst of gameplay than a specific scenario, and as such doesn't use my Bleak Falls Barrow design, as creating a full working dungeon was slightly beyond the scope of the project. With that being said, the small area I created – an Imperial camp which has been taken over by bandits – works perfectly well for a brief combat encounter, and also serves as a simple yet effective way of showcasing the visual style. This makes me confident the top-down style would continue to work for full dungeons, towns, and other locations!

The Visuals

I'm very happy with how the top-down HD-2D visuals turned out. The low poly 3D environment coupled with the shallow depth of field adds unique depth and really does make everything look like a miniature, which goes well with the medieval setting as it is – as I had hoped – reminiscent of a tabletop RPG, so it works as a bit of a throwback in the wider context of fantasy roleplaying games. Additionally using 2D sprites for the characters and creatures does make them stand out against the background, while the simple sprites make it easier to project a personality onto the representation of your character – once again, good for roleplaying!

The environment assets, character base sprites, and dragon sprites all came from itch.io, from Visions Mind, shubibubi, and sanctumpixel respectively. I altered the environment assets to add the Imperial flag and altered the character sprites to add the armour!

The Sound

I stuck with the music from the original game, as I think it adds a lot to the atmosphere which is particularly useful when creating a simplified 2D version. It also increases the drama, which works well coupled with the dramatic lighting and depth of field. Additionally changing the dragon roar so that it could be heard off screen was definitely the right move, as it gives a brief moment of panic, adding to the tension, while also letting you prepare for the oncoming attack.

The sound effects I used for the combat, magic, and dragon all came from the Unreal Marketplace, and the “fus ro dah!” comes from the original game. The lightning sound is from Zapsplat.com.

Conclusion

Overall, I'm super happy with Skyrim 2D, which is good as before starting the project, the scale of the original game was quite intimidating! I actually started the demo before the document this time, as I was keen on setting up the HD-2D visuals with the depth of field effects. This ended up being a good move, as it let me know that it was possible (there weren't difficulties like with Subnautica 2D's ill-fated cylindrical world) and that it looked great and worked the way I wanted it to work!

I had an interesting realization while working on this project. While I want to make it clear that my previous adaptation, Subnautica 2D, ended up being a successful project which I'm proud of, I found myself being a lot more enthusiastic about both Skyrim 2D and Resident Evil 2D while working on them. For both Skyrim 2D and Resi 2D I had a clear and distinct vision from the get-go, not only for the gameplay, but the visuals, which required more effort to achieve the stylised results. Subnautica 2D's straightforward semi-realistic style, while working well and implemented intentionally to successfully increase immersion and relatability, stands out as being a little less unique and interesting than the others, partially because it's the same graphical style as the original. Generally, 2D is great for stylised visuals as you aren't necessarily limited to polygons, or by having to stay close to reality. I think this is why I prefer how Resi 2D and Skyrim 2D look. Once again, that's not to say I'm unhappy with Subnautica 2D – the style I went for achieves exactly what I wanted, it's just a little less eye-catching.

I was concerned for a while that Skyrim 2D was not 2D enough. After all, the world itself is 3D, and there's also some verticality – I went into this earlier, but I want to reiterate as it's important to the project. This uncertainty prompted me to look even further than I already had into what people consider to be 2D and 3D. What did I find? A whole bunch of inconsistency and contradiction. Some people consider any game which utilises 3D graphics in any capacity, such as New Super Mario Bros., to be a 3D game regardless of the strictly 2D gameplay, and some people consider Metroid Dread,

one of the games that inspired my whole MA project, to be a classic 2D platformer, despite featuring a fully 3D environment, and moments where it shifts into an over the shoulder perspective.

For this whole project I've been focussed on how restrictions and limitations encourage creativity, and that's what I think is the most crucial aspect of the adaptation process. All my adaptations keep the gameplay restrictions and limitations of the flat 2D games that I used for inspiration – the 3D elements are just part of the presentation. The gameplay of Skyrim 2D would work the exact same way in a purely flat style as well. Even the verticality, as like I mentioned earlier, games such as A Link to the Past emulate verticality with perspective and parallax background movement. Even shifting to sidescroller mode has been done – the original, purely flat Link's Awakening on the Game Boy features both top-down and sidescroller gameplay, for example. Modern technology and a 3D environment simply made it possible to have an in-camera transition between two styles of gameplay which stick to the conventions of classic sprite-based 2D games!

This is why I'm happy with Skyrim 2D. The restrictions and limitations to the gameplay are what brought about the interesting design changes and creative problem solving, and being able to utilise 3D assets helped capture the essence of the original, while still staying true to the aforementioned gameplay restrictions and design conventions of purely flat games. This helped give the adaptation a bold style, which also happened to include using flat 2D sprites for characters and creatures – we've come full circle!

And with that, I've finished my adaptations, at least for my MA. At this point I'm entirely confident that the adaptation process as a whole is a fun and challenging exercise for anyone interested in game design, which encourages both thoughtful analysis as well as creation. That's why next, I'm going to create a guide of sorts, so anyone who is interested in giving it a go has some guidelines to work from. I'll also be able to explain to them why certain choices work well due to the advantages of 2D thanks to my two essays.

Thank you for joining me on my adaptation journey!