

DROPLET GDD

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DES303

PROJECT LOGLINE

When a hopeful young raindrop is precipitously plunged into the world below, she must overcome self-doubt if she is to recover her once hopeful, colorful self and leave a lasting impact on a dispassionate world.

TYPE / STYLE of GAME

Droplet is a 3D, atmospheric third-person platformer that delivers a consequential story without substantial character interaction and zero dialogue.

PROJECT MOOD

A black and white, doubtful mood sets the stage but is quickly overrun with colorful tones of passion and hope that lead to a bittersweet conclusion.

OVERVIEW

Droplet is a 3D, third-person platformer with infinite runner elements. Using rooftops and drainage systems, the player will go through the water cycle to make their way to a city's water sources. In doing so, they will restore color to a gloomy, black, and white city, but at a climatic cost.

As a raindrop named Droplet, the player will be carried away to a dispassionate city where they must recover their once hopeful self after succumbing to self-doubt and terror. Once found, they will sink, vaporate, and splash their way through a black and white city, using their newfound hope, abilities, and the city's water sources to restore it back to its colorful, glorious self.

EMOTIONAL START

Self-Doubt.

CATHARTIC EVENT

Passion is restored.

EMOTIONAL CONCLUSION

Hopeful sacrifice.

TECH SPECS

ENGINE

Unity 2019.4.10f1

NUMBER of PLAYERS

Droplet is a single player game.

ESTIMATED GAMEPLAY (MINUTES)

~20-30 minutes of gameplay.

CONTROLS

Droplet is designed for **controller**...

- **Left Joystick** (Player Movement) / **Right Joystick** (Camera Movement)
- **Right Trigger** (Jump)
- **Right Bumper** (Vaporate)
- **Left Trigger** (Sink)
- **A** (Menu Interaction)
- **B** (Reset to last checkpoint, continue from checkpoint)

CAMERA

Droplet's camera is in the third person perspective. It will be fully maneuverable around the character but is locked from moving too far under the character to prevent clipping and unnecessary occlusion work. Most of the game is spent going downward, so looking up is just unnecessary. The player will move in the forward direction of the camera.

CHEATS

Press the **LEFT** and **RIGHT ARROW KEYS** to teleport between each checkpoint in each level.

MECHANICS

Jump - The ability to launch oneself into the air will be a necessary ability when traversing the world. However, since the player is a raindrop and water does not necessarily “jump”, this will not be a typical platformer jump. Instead, it needs to adhere to the feeling and flow of water. Jumping gains altitude, but only slightly. Holding jump increases this height, but the jump isn’t complete without being charged up by the Sink ability.

Sink - This is more like the opposite of the jump. Instead of launching into the air, the player will sink into the ground to be able to pass under/through specific objects in the environment, **like a dash with i-frames**. It will charge up their next jump when fully charged, increasing jump height substantially.

Vaporate - With the core game loop following the water cycle in reality, evaporating is a key element. When **in hot air**, Droplet will be able to gain extra height, even after jumping, to chain platforming combos together.

Reset – At any point, the player can reset themselves back to the previous checkpoint they hit. Checkpoints keep speed and direction to allow for momentum to be preserved.

UI / UX ELEMENTS

The User Interface will be incredibly minimal. Besides UI for the player’s current objective/goal, a sink meter, vaporate controls, and location, there is no other UI. Health is non-existent as it follows a one-life approach. UI is mainly dynamic, meaning it is constantly updating and only on-screen when needed.

WIREFRAMES

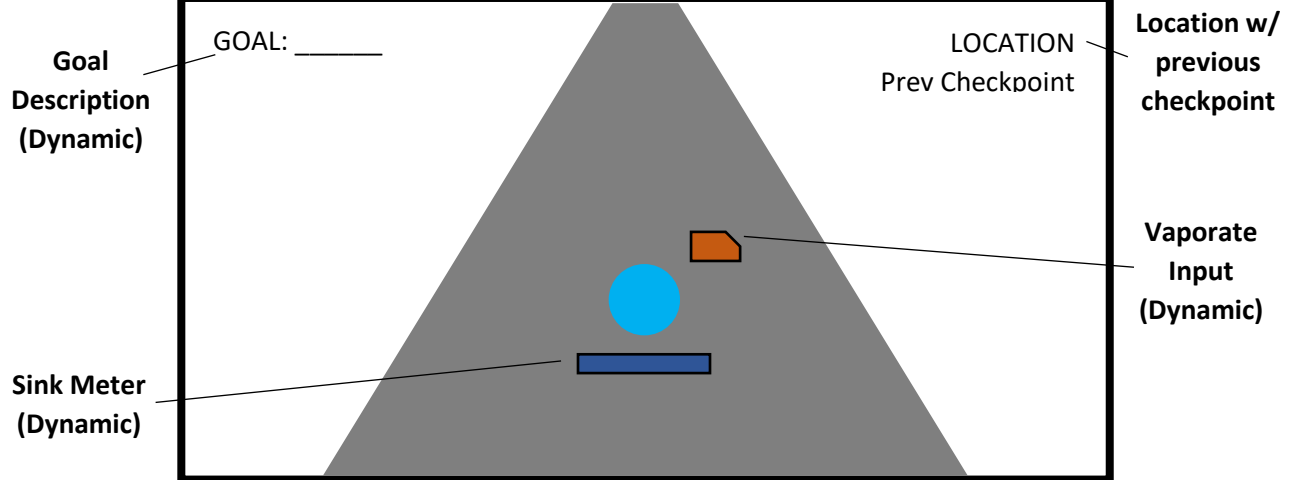
Main Title Screen

DROPLET

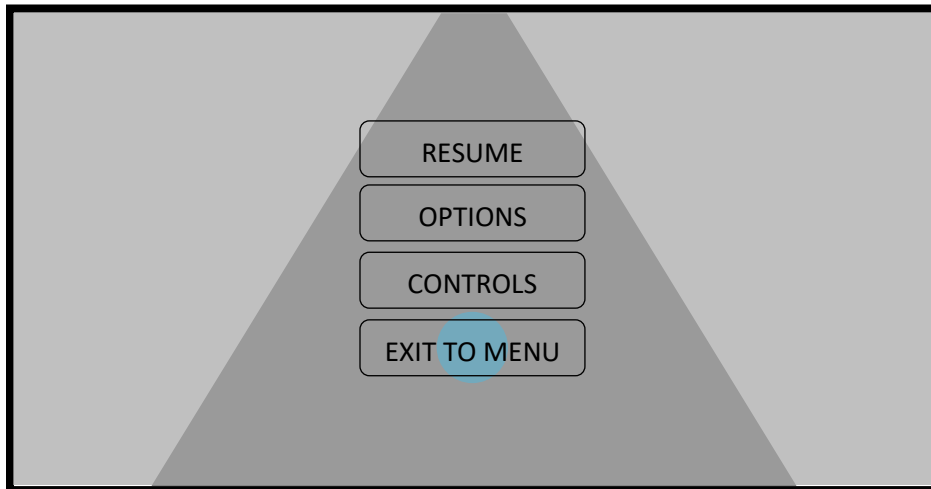
Press A to start

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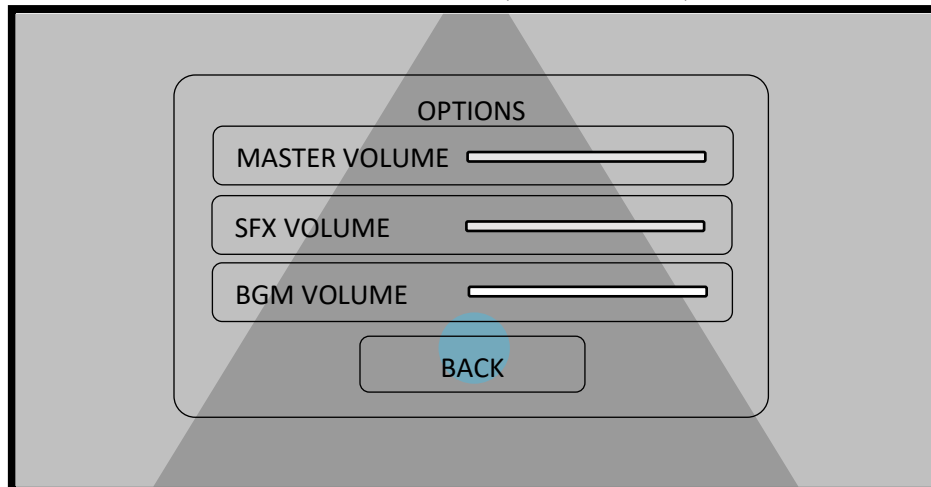
HUD



Pause Menu



Options/Controls (same layout)



LEARNING

Initial mechanics and core gameloop are taught through guided gameplay. When the game starts, players will drop right into the middle of Droplet's training where they are introduced to movement, checkpoints, color restoration, and jumping. Here, the core feel of the game will be established and challenged as movement and well-timed jumps are key throughout the game. Once they move on in the story and get past the hook, new mechanics will be earned. Small pop-ups of buttons will give the player a basic idea of how they work to let them move on quickly and prevent the need to read or watch a tutorial.

AFFORDANCES / SIGNIFIERS / FEEDBACK

CHARACTER / ENVIRONMENTAL

AFFORDANCES

Move - Droplet moves along the ground, accelerating over time to a maximum speed. Always faces in the forward direction of the camera during movement.

Jump - Droplet can jump once, no mid-air jumps. The height of the jump is based on the time the right trigger was held down, up to a certain degree. She can jump even higher when paired with the Sink ability.

Sink - Droplet can "sink" into the ground, allowing her to pass through certain objects. While in this state, Droplet can build up extra energy to make the next jump gain more height.

Vaporate - Droplet can use hot air to ascend in midair, without the need for jumping.

Reset - Droplet can fall off the desired path, which teleports her to the correct position (previous checkpoint) or can be manually initiated.

Restore color - Droplet brings color back to the environment when she touches them with her ground collider.

"Surf" on curved surfaces - Droplet can use curved surfaces and ramps to "surf" along the environment. Gaining and maintaining speed around corners.

SIGNIFIERS

Move - Droplet faces forward, away from the camera, at the start of the game.

Jump - Large gaps paired with high gravity make it obvious when a jump is required.

Sink – Grates, which are flat squares covered with holes, are the only objects that sink allows one to go through. Holes signify the ability to pass through.

Vaporate – A button prompt appears when able to vaporate. Pillars of particles moving upward, from fan blades, show the areas in which vaporate is necessary and allowed.

Reset – When stuck or on death, reset text with the proper button pops up on screen.

Restore color – Most objects in the first level are colored, so greyscale objects look incredibly out of place.

“Surf” on curved surfaces – Curved surfaces and high gravity ultimately push players to attack them with careful speed and precision or they will go flying off.

FEEDBACK

Move – A shader on the character makes her look like a drop of water, only when moving or falling. A looping water sound effect also plays.

Jump – Droplet squishes inward when jumping. A particle effect is left behind where she jumped from. A layered sound effect plays. The controller vibrates based on how long the trigger is held. Droplet squish outward and makes another sound when hitting the ground.

Sink – Droplet’s character model moves halfway underground. A sound effect plays. Particles shoot out above her. If held, a sound effect loops. When let go, the character model moves back up and another sound effect plays. In later levels, Droplet changes back to her old self after reunion.

Vaporate – A giant particle trail follows Droplet as she vaporates until she hits the ground. A sound effect accompanies it.

Reset – When held, the reset text and button prompt appear on screen with a radial fill around the button.

Restore color – Objects launch a flurry of particles out and up when color is restored. A sound effect is played and if multiple objects get color restored in rapid succession, the sound effect rises in pitch.

“Surf” on curved surfaces – Droplet doesn’t lose speed when done correctly.

Current Mood – Droplet’s eyebrows, pupils, mouth, and color change depending on the context of the situation at hand (during cutscenes)

LEVELS

LEVEL 1

Act – Setup/Hook

Theme – This level is full of hope, excitement, and preparation for something that is beyond both the player and the character. It gives purpose to Droplet's character and creates necessary buildup for a harsh, reality-checking hook.

Description – This level's purpose is to introduce the player to not only the mechanics, but the character they are playing as and her goals/purpose in this world. In a brightly colored playground, they will learn the mechanics as Droplet practices for her big moment which is just days away. However, a giant storm comes in and sours the mood at the end, whisking the player away and hooking them into the experience with a grand, set piece moment.

LEVEL 2

Act – Hook/Development

Theme – It is here where the reality-check that splits Droplet into two occurs. It is the initial hurdle to get over, it is also the biggest hurdle. Self-doubt plagues Droplet's mind but with a final push, she restores her hope. Overcoming this is what gives her purpose behind her newfound goals and understanding of the world.

Description – This level is also the intro to the city and a twist on the core gameloop (sink). Here, the character traverses the city's water treatment plant, looking for a way to reach her lost self that she just split from. This level is built around sinking as the character herself is at her lowest, saddest point. The level ends with a reunion between the two Droplets and a newfound hope to emerge.

LEVEL 3

Act – Development/Turn/Resolution

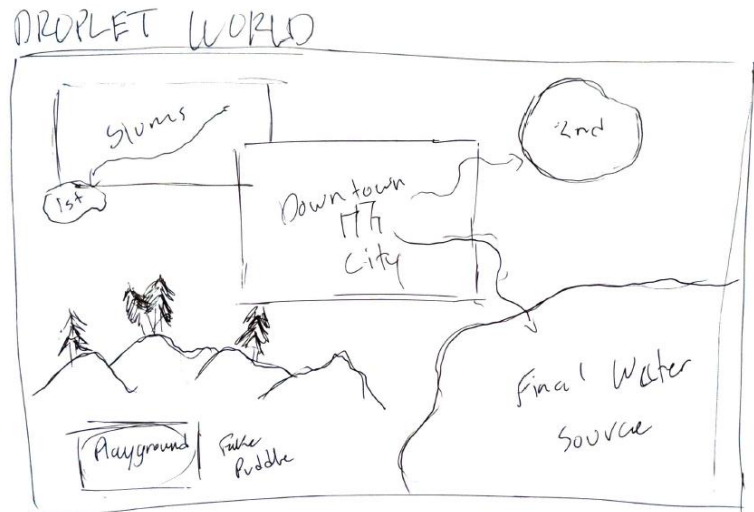
Theme – With this newfound hope and knowledge, Droplet finds what she needs to help other raindrops who succumbed to a similar fate and restore color and hope to the city.

Description – Upon coming to a rooftop of a building in the city, Droplet finds her way to the lake. $\frac{3}{4}$ of the way through the level, she sees the lake but in that moment, realizes a sacrifice might have to be made. She continues on and goes through with it, completing her Landfall and restoring color to the whole city in a final, epic cutscene.

LEVEL DESIGN SPECIALIZATION

Droplet World Overview

With such a heavy focus on narrative in this project, I started my level design work by planning out the world, giving each level/goal a distinct physical location and theme. The idea was to create a world that gave me context for locations of levels and goals. That way I would be able to accurately place them in the world and show that the character is actively making progress that could be seen, just by looking around. This plan was initially for 5 levels, which eventually was cut down to 3, but the same structure still applied for the most part.



Level 1 - The Old Playground

Level 1 went through a lot of iteration, even though it kept a similar layout in the end. One aspect that was iterated upon a lot was the jumping sections. Initially, I had the player slow down to make precision jumps between platforms, more akin to a classic 3D platformer. This turned out to be a terrible idea as it went completely against the feel of



being a momentum-laden raindrop. Another large issue I encountered was with the time necessary to understand and practice with the movement. It ultimately had to be



cut short due to limits in both dev time and game length. So, I made the end of the level a bit of a difficulty spike to really try and get players to understand the movement before moving onto new levels. It isn't the greatest design in the world, but the iterations I went through and testing I did proved it did its job in the end.

Level 2 – Water Treatment Plant

Although level 1 had its difficulties and a lot of iteration, level 2 went through the most iteration of all the levels. My main difficulties with it were the lighting and the second half of its challenges. With this level introducing both the city and the doubtful half of the main character, that “sinking” feeling one gets when a daunting task is revealed, was the intent behind its mechanics and structure.

The sink ability made for some interesting evolutions and expansions, but early versions of the level just didn't flow like the first level. The L-shape the level originally had was one of the reasons why. When the player hit the turn (circled in red), the goal of the level would come into sight and the “turn” of the level would be introduced. However, what ended up happening was players missed the turn, flew right off of it, or completely lost momentum and direction. It was too sudden of a change, it broke a lot of the flow the level could have. So, I remade the entire lower portion of the level and straightened it out. With some additional tweaks to how the sink ability worked (like increasing gravity when used in mid-air), I was able to make challenges that fit being a raindrop a lot better. I was also able to place the goal in sight of the player more often which helped with direction and understanding of objective.

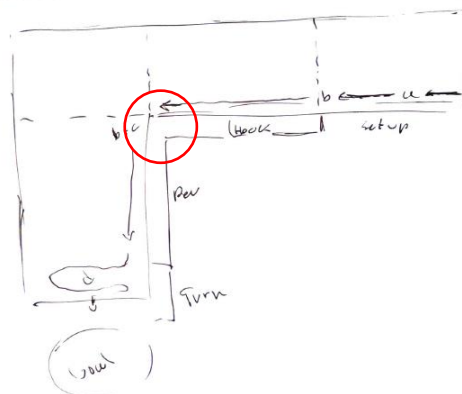
Setup of Water Treatment Facility

Context

↳ Droplet has fallen to the city, and split into two. The low, sad, unenthusiastic self is who the player controls. Although they are still a raindrop, they need to feel the change of the addition of the sink ability.

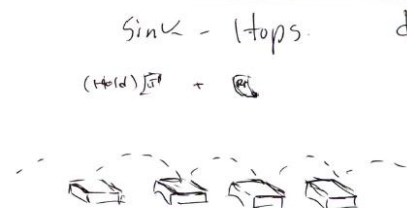
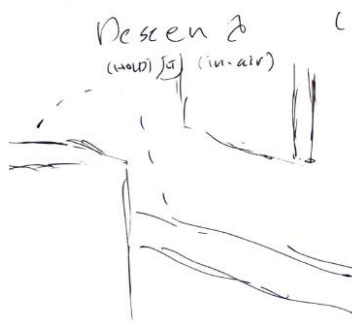
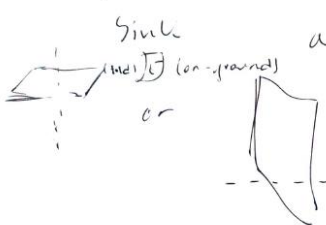
Sink Mechanics

- Pass through (1)
- Descend mid-air (2)
- Enhance jump (3)
- Avoid jumps (4)
- hops
-
- Sink (a)
- Sink + jump (b)
- Descend (c)
- Sink Hops (d)



Challenges

One thing that helped me a lot in creating interesting challenges was planning out the capabilities of each skill along with the types of challenges I wanted to put the player through. In doing so, I had a document to reference whenever I hit a snag, which reminded me of what I could do to get out of said snag.

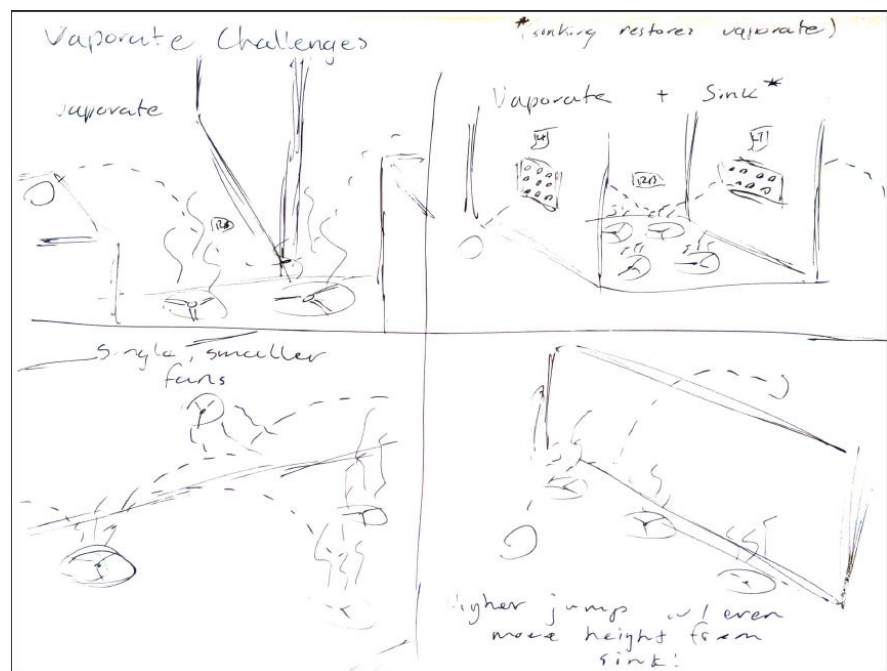


74.7 Level 3 – City Rooftops

Level 3 did not get to see the same level of refinement as the other two did as I simply ran out of time. However, I am happy with the level it is at in the shipped build as it is definitely the most fun and interesting of the levels. With the addition of the vaporate mechanic, on top of the sink and jump mechanics, there were far more opportunities for myself to create unique challenges/sections within the level. Vaporate basically lets you ascend into the air and thus, has a very uplifting nature to it. Combined with the sink ability, which had the opposite feel, the emotions that the character is going through are translated within the mechanics. This was very important for me to nail so I wanted to be sure that sink and vaporate worked together, as Droplet and her other half would need to in order to take on this massive objective of restoring color to the city.

On its own, vaporate is quite simple, but that combination with the other abilities really does make this level shine, at least in my eyes. Usually when all the mechanics come together, that is some of the most fun in games, which happens in this level. That is why I initially planned for 5 total levels, so I could iterate upon all the mechanics in multiple levels, but I am still happy with what I got out of this level's design.

Being made after all the others wasn't all bad either, because at that point in production, I had two levels that set the feel of the game, so I had a lot more to go off of in this level. As with level 2, I sketched out the types of challenges the vaporate ability could pull off to base the level around.



CHARACTERS

DROPLET

Purpose in game – Protagonist

Appearance – Droplet is a small raindrop. She is bright blue with basic, but adorable facial elements that allow her to convey emotion.

Motivation/Goal – Complete her Landfall and enter into the water cycle as an adult Raindrop.

Special Abilities/Unique Aspects – Droplet can jump, sink, and vaporate.

Overview – Droplet begins the game as a hopeful raindrop out on a mission to practice for and ultimately, complete her landfall. However, events make such a future more complicated and while she does ultimately carry out that overall goal, much more is at stake and she is sacrificed to carry it out.

STORY OVERVIEW - FIVE-ACT STRUCTURE

LOGLINE

When a hopeful young raindrop is precipitously plunged into the world below, she must overcome self-doubt if she is to recover her once hopeful, colorful self and leave a lasting impact on a dispassionate world.

EMOTIONAL START

Self-Doubt.

CATHARTIC EVENT

Passion is restored.

EMOTIONAL CONCLUSION

Hopeful sacrifice.

ACT ONE

Droplet is an excited and hopeful young raindrop who has yet to venture out into the world on her own, although the time is soon approaching. As she practices for this grand event (known as one's Landfall) on an abandoned playground, she witnesses the passion left behind by raindrops who have already moved on. The once dreary and drained playground is now full of color and passion. This makes Droplet all the more excited to see the big city in which her Landfall will be made. She only hopes there are parts of the city untouched so she too can leave a lasting impact.

ACT TWO

A storm rages past the playground and carries Droplet away. Unprepared and without a chance to say goodbye, Droplet is filled with terror. The storm carries her all the way to the city where she decides to face her fears and commit to her Landfall. As she

plunges from the crackling clouds above, she is shocked to find the city devoid of all color. It is nothing like what she had dreamed of. As terror and shock overwhelm her, she splits into two and the once hopeful, passionate young raindrop is blown away into a nearby pond leaving a frail, scared, colorless raindrop plummeting below.

ACT THREE

Droplet's fears and self-doubt cloud her mind as she rolls down the face of the city's water treatment plant. As she nears its edge, ready to fall for one last time, she finds the puddle of water in which her other half fell. The pond shimmers as colorful as the playground back home and a small flicker of hope leads Droplet towards the pond. There, she is reunited with her past self, but hope is not fully restored.

ACT FOUR

She refuses to leave a city she once longed for in ruin and with her newfound ability to spread that hope and color, she sets off to spread it to the various bodies of water around the city to bring it back to life. From a building in the city, Droplet begins the hard work. She makes her way along the rooftops, using all she has learned to find the lake. After spotting it, she rushes down from the rooftops and get to it below.

ACT FIVE

Droplet nears the lake, the largest body of water in the city's supply of water. As she nears this final body of water, she realizes that a body that big will never fully evaporate, leaving her potentially stuck forever. However, she pushes through that final barrier and drops into the water below, finally immersing the city in color, completing her landfall, and leaving her lasting impact on the world.