It takes
two ~~two~~
ONE

But it's kinda tough

**A Third-Person 3D Puzzle Platformer
Based on It Takes Two
Made in Unreal Engine for Fortnite
By Grace Yang**

SUNNY AVE

Changelist

Date	Description	Author
November 4, 2023	Removed all hope of physics dependent puzzles because UEFN removed simulate physics option 🙂	Grace
November 4, 2023	Playtesters wouldn't understand where to go from spawn to the first part of the level. Changed player spawn to inside the first stage	Grace
November 10, 2023	Playtesters were holding down a movement button while in the wind tunnel meaning they could exit it at any moment and not be able to get back in. Changed wind tunnel to a grind rail so players know to stay on.	Grace
November 17, 2023	Changed main mechanic in village level to impulse grenade	Grace
November 20, 2023	Added more jumping/platforming challenges to the start of level	Grace
November 21, 2023	Changed layout of shotgun introductory section	Grace
December 4, 2023	Player didn't take in the environment before proceeding and came to the conclusion that he had to jump to the middle platform. Extended starting path so it takes up a little more than one third of the screen when the player sees the first section and the path clearly leads in that direction	Grace
December 4, 2023	Players would go at full speed on the grind vines and end up launching too far off the platform. Changed the vine so it is continuous and doesn't have any premature jumping challenges.	Grace
December 4, 2023	The "marble course" inspired section is impossible, the metrics are off and the player could not get past this area. Transformed the whole area to be way more streamline and more of a prop gun scenic moment than a platforming challenge.	Grace
December 10, 2023	Added some one point lights in prop area so player understands where to go and where is just for fun	Grace

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Story

May realizes that she needs to spend some time apart from Cody and uses this time to rekindle her relationship with her daughter by revisiting one of her favourite books, thus realizing how hard it is to manage being two parents at once.

The player (May) appears at a mountain clearing just on the shore with the cast endless ocean just behind her. She **moves forward** and is met with rocks that she realizes she can **jump** on top of but some are too tall to **jump** to, she will need to vault. Going up a couple of rock platforms, she's met with a view of a canyon of sorts filled with random enlarged knick knacks with a single **moving platform** and a **path** to the left directed by a sign. She **proceeds through the path** where there seems to be obstacles obstructing her way but she already knows her **athletic aptitude** enough to know she can jump over it easily. She then comes back around to the canyon and she already knows that she is capable of **jumping** to this next moving platform over the tall drop. She is then met with more **jumping** challenges and pistons she has to avoid until she sees a tunnel. May is too tall to fit into the tunnel but fits perfectly when she **crouches**. As May **maneuvers** herself around the tunnels, there are various openings where her **jumping** skills will be tested once again.

She leaves the tunnel and is met with a cave room with toxic water at the bottom. A **shotgun** can be seen on this platform across the water, too high to jump to and a set of stairs lead to an opening obstructed by piles of wood. She realizes there is also a **moving platform** to the left and she traverses various obstacles until she gets a hold of the **shotgun** and destroys the **wooden obstruction**. Through the opening there is more of that toxic water, there's some **moving pillars** just like the ones from the canyon earlier. She **jumps** onto them and they lead to a lilypad that **launches** you in whichever direction you are facing or going. She **jumps** onto the lily pad and **launches** over to a bigger one and then onto a platform with more wood that she takes down with her new shotgun.

May **runs** up to the platform and sees something: **a predator**! She has a **shotgun** so she figures she can protect herself and **shoot** the predator. After the predator dies she sees what was behind it and it was some **vines**. The moment she touches the **vines** she is sent **gliding** along it in a spiral to the top where it is clear she needs to **shoot** this wooden **obstruction** in her way. **Jumping** off the **vine** brings her to a loft filled with objects that are way bigger than they should be and some that are way smaller. There, she finds a different **gun**. Through fiddling with it, she realizes it is a **prop gun** that **turns** her into whatever she aims the gun at. She then **destroys** the obstruction and realizes the opening is too small, she has to **transform** into a small ball on the chair to fit through.

May then enters an area with many **sweets, paintings,** and **pretty things**. She goes on a **grind vine** that tours the area and it leads her up to a **shooting range** for practice. After she's done playing in this **prop playground**, she goes up to the door that she's supposed to **proceed through** and once again, she needs to **transform** into a ball. Staying as a ball, she goes through these pipes that lead to a section once again above some toxic water. It appears to be some sort of marble course with rings just big enough for a ball to fit through. At the end of the course, she **jumps** to a wind tunnel and it sends her over to where there are more **grind rails** and many **predators**. She **shoots** the predators and **jumps** onto one of **three grind rails** in front of her as she tries not to get obstructed by an **exploding flower** in her path or a **decrepit house** on the side of the mountain.

At the end of the **vines** there is another house on the side of the mountain but it's bigger and **obstructed by wood**. **Entering in**, she is met with an **impulse grenade** and a hole in the roof that is too high to **vault** over. She uses the **impulse grenade** to launch herself through the roof. She then gets a view of the next section she is about to enter: a vertical village with houses at the side of the mountain. There are puzzles inside the gnome houses that help her **move** from one to the other without falling into the toxic water beneath. The puzzles involve using the **impulse grenade** as well as **transforming** into balls and **shooting** obstructions.

Leaving the final house, there is another wind tunnel that brings her to a level where she is able to glide through 2 rings that lead her to a rock at the side of the mountain. **Jumping** on top of the last couple of **jumping and vaulting** challenges now at a drop height never seen before, she gets to the peak and there are **wolves** waiting for her, predators she needs to protect her daughter from. She **shoots** them all and is rewarded with a view of her chaotic and mountainous journey up.

Reference Material

Story

The story is meant to be an alternate universe of the game It Takes Two where May doesn't get back together with Cody and instead, takes some time to herself and tries to rekindle her relationship with her daughter, Rose, in the top right. Because a lot of the feeling of It Takes Two comes from the grandeur of being a tiny doll in an enlarged world like in the bottom 4 images, a lot of the architecture and environmental pieces will be supersized to match it.

Setting/Environment

The environment is based on fantastical story books and will traverse through a cave, the water, a gnome village, up a mountain and will basically emulate a child's imagination. This means there will be ice cream, dinosaurs, beasts, trees, and other random objects, like seen in these picture books, strewn about the level that help with the architectural composition and also evoke that randomness in a child's mind.

Character

The player is going to be May from It Takes Two except now she is on her own with the tasks of two parents. See here the moms from The Babadook and Sex Education reading to their kids and suffering.

Feature

The feature will be during the mountain exterior biome where there will be a gliding section jumping challenge and will feel similar to the alpine coaster and like the glider in Tale of Two Brothers.

Program

Gameplay Program

1. Walking

2. Jumping

- Jumpable distances
- Vaultable walls
- Moving platforms
- Over obstructions
- Over exploding flowers

3. Crouching

- Tunnels

4. Transform

- Prop-o-Matic
  - Transform into small props to fit in small spaces

5. Shooting

- Shotgun
  - Shoot to break obstacles obstructing doors to next area

6. Launch

- Lily Pads
- Mushrooms
- Impulse grenade
  - Use impulse grenade to launch to higher platforms

7. Grind

- Grind Vines/Rails
  - Feel like a coaster up the mountain

8. Static Hazards

- Path obstructors
  - Wood
  - Houses

9. Moving Hazards

- Wolves
- Pistons

10. Checkpoints

- Progression & path direction

Narrative Program

Canyon

- Left elbow path —Teach walking and jumping on platforms, pillars, walls, moving platforms
  —Test jumping to moving platforms over canyon
- Right Elbow path —Avoiding crushing pistons
- Tunnel Opening —Teach crouching
  —Test jumping to platforms

Cave

- Shotgun room —Get shotgun and teach shooting at wooden obstruction
- Cave pond —Test jumping on static pillars and moving pillars
  —Teach jumping on lily pads and launching up
  —Test jumping on lily pads and launching in specific direction
- Predator room —Encounter enemy from a safe distance and teach shooting at moving target
- Vine spiral —Teach grinding on a vine
  —Test shooting at wooden obstruction while in motion

Princess Loft

- Prop gun room —Get prop gun and teach transforming into different sized objects
  —Tests transforming into a small ball to fit through small crack
- Prop Playground —Teach jumping on mushrooms and being launched
  —Test transforming into ball to get through small opening

Marble Course

- Challenge moving and jumping through small rings —Teach wind tunnels and gliding to specific
  platforms
- 3 predators —Test shooting moving targets
- Grind rails —Teach jumping from one grind rail to the other grind rail
  —Teach grind rail obstructions such as exploding flowers and abandoned houses
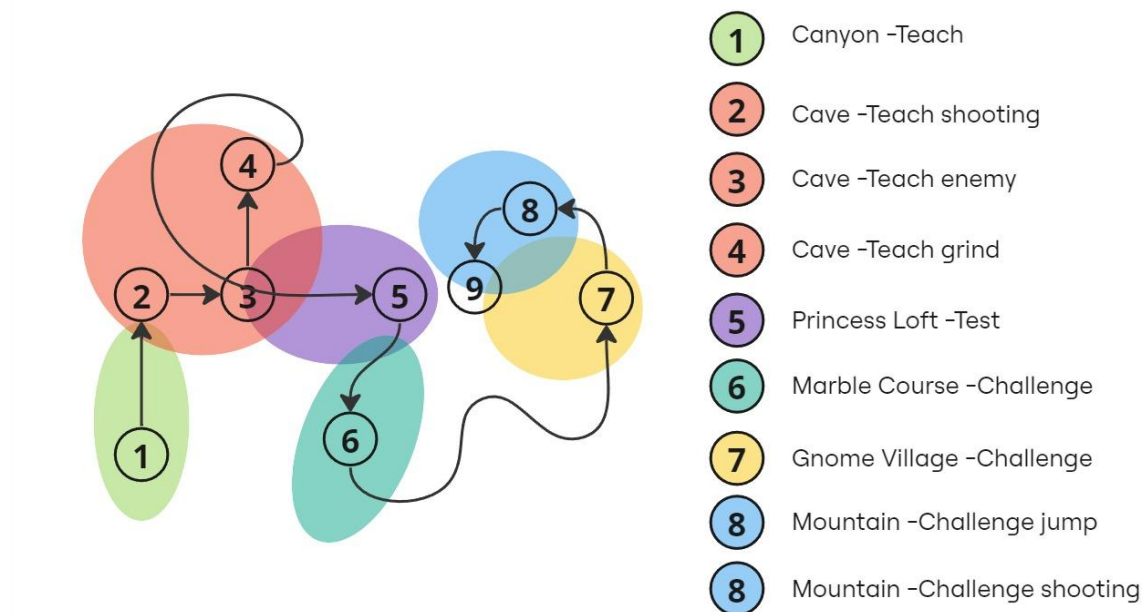
Gnome Village

- First house —Get impulse grenade and teach getting to higher platforms by launching
- Vertical Village houses —Challenge transforming into ball from house across the chasm to fall
  through tight holes
  —Test using impulse grenade to launch to higher platforms

Mountain Peak

- Wind tunnel —Test using glider after wind tunnel to glide through rings to make it to a specific
  platform
- Cliffside —Test jumping and vaulting up platforms
- Peak —Challenge shooting predators

Diagrams

Checkpoint Flow Map

|	
1	Canyon –Teach
2	Cave –Teach shooting
3	Cave –Teach enemy
4	Cave –Teach grind
5	Princess Loft –Test
6	Marble Course –Challenge
7	Gnome Village –Challenge
8	Mountain –Challenge jump
8	Mountain –Challenge shooting

Bubble flow map of checkpoints in the level —documenting the regions they are in and the functionality of the section in the greater gameplay flow.

Pacing Graph
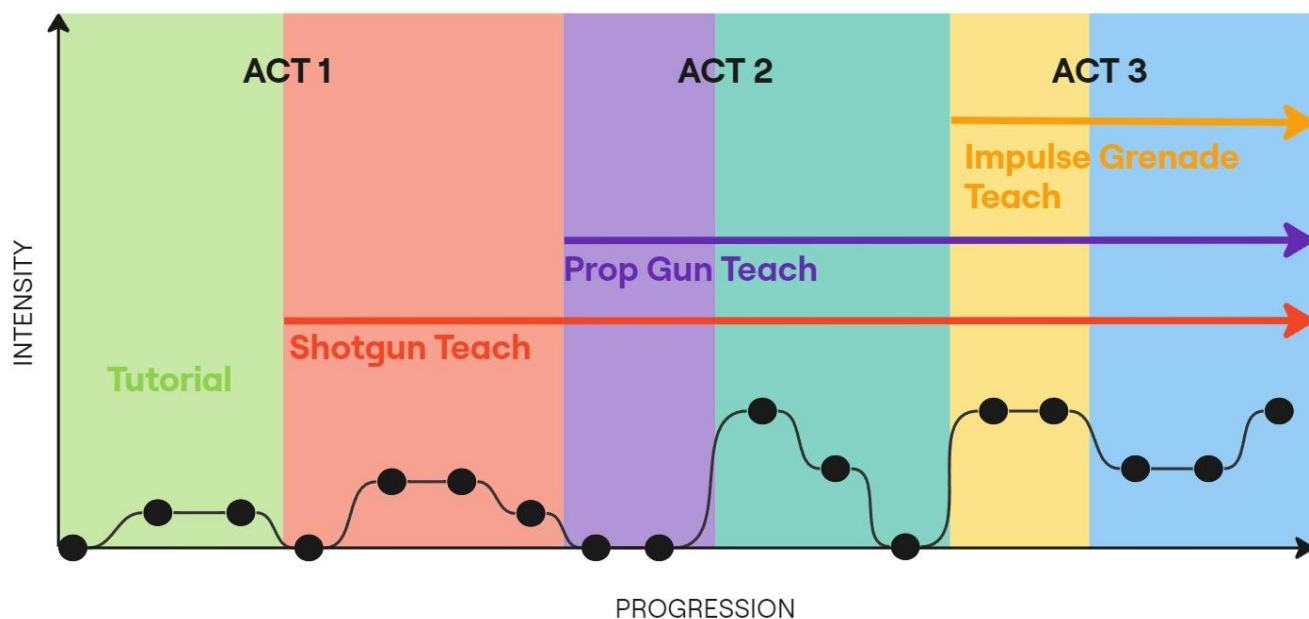
Pacing chart showing the intensity levels of important gameplay beats, at which stages item related mechanics are introduced, and their roles in the progression of the game. The chart is showing how there are sufficient moments of rest and a slow progression for easy level gameplay.

Parti Diagram of Canyon
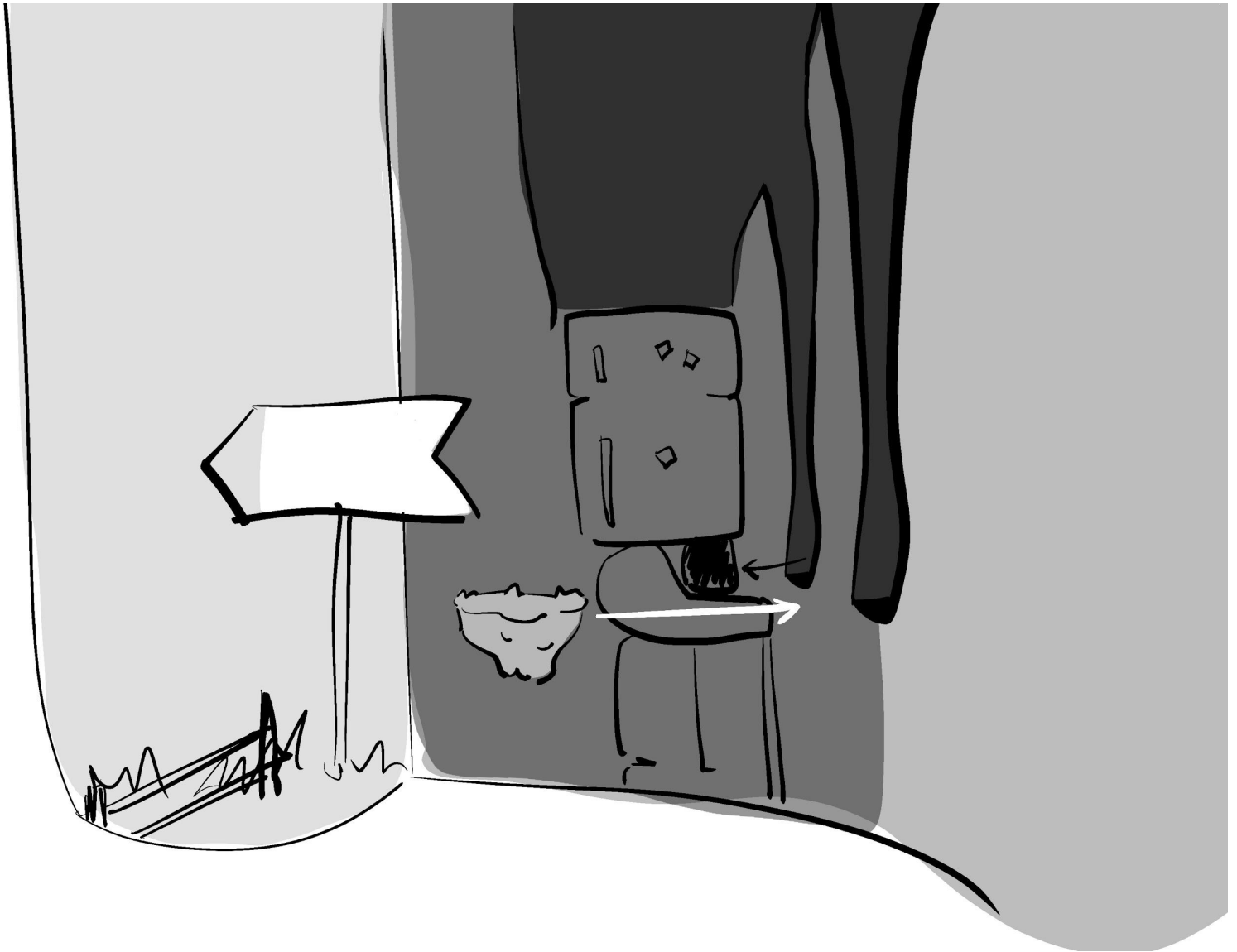
Parti diagram of canyon in tutorial level showing the foreground, middleground, and background of the first section of gameplay the player will see going into the level. This sketch shows how the player will perceive the level from the start and how it will direct their eyes to where they will go, what they will see up ahead, and what they should prepare for. Specifically the player's eyes are guided to the left where they are headed but see that further ahead there will be a moving platform they have to jump on to and a hole they will have to crouch in

Metrics

Character Metrics

Standard Fortnite Metrics: 1 uu (Unreal Unit) = 1 cm (Centimeter)

384 cm

Max vault

Ceiling

140 cm

(minimum crouch)

Tall wall

192 cm

112 cm
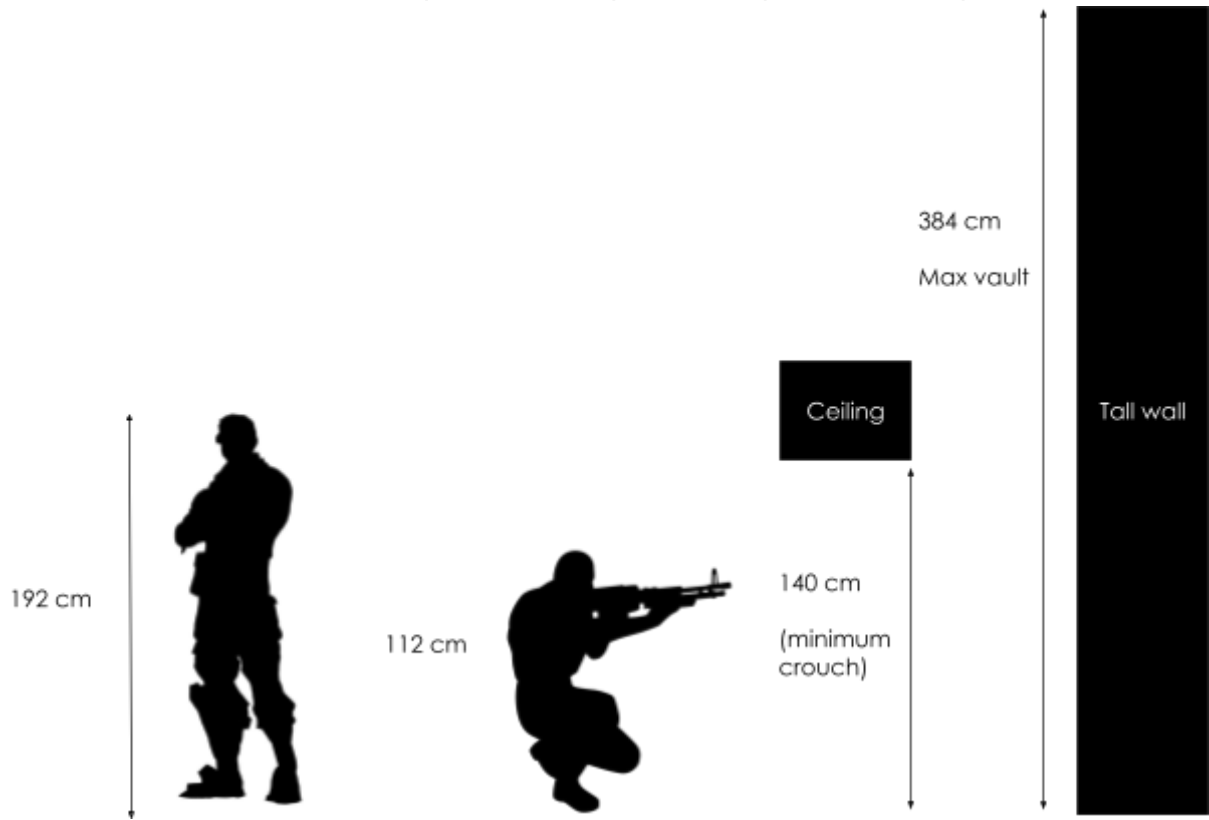
Object Metrics

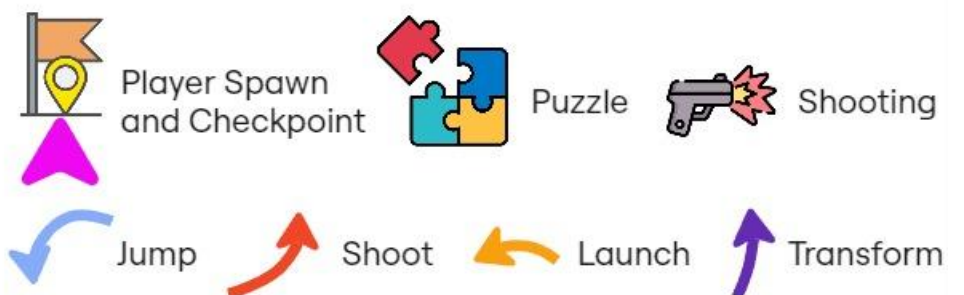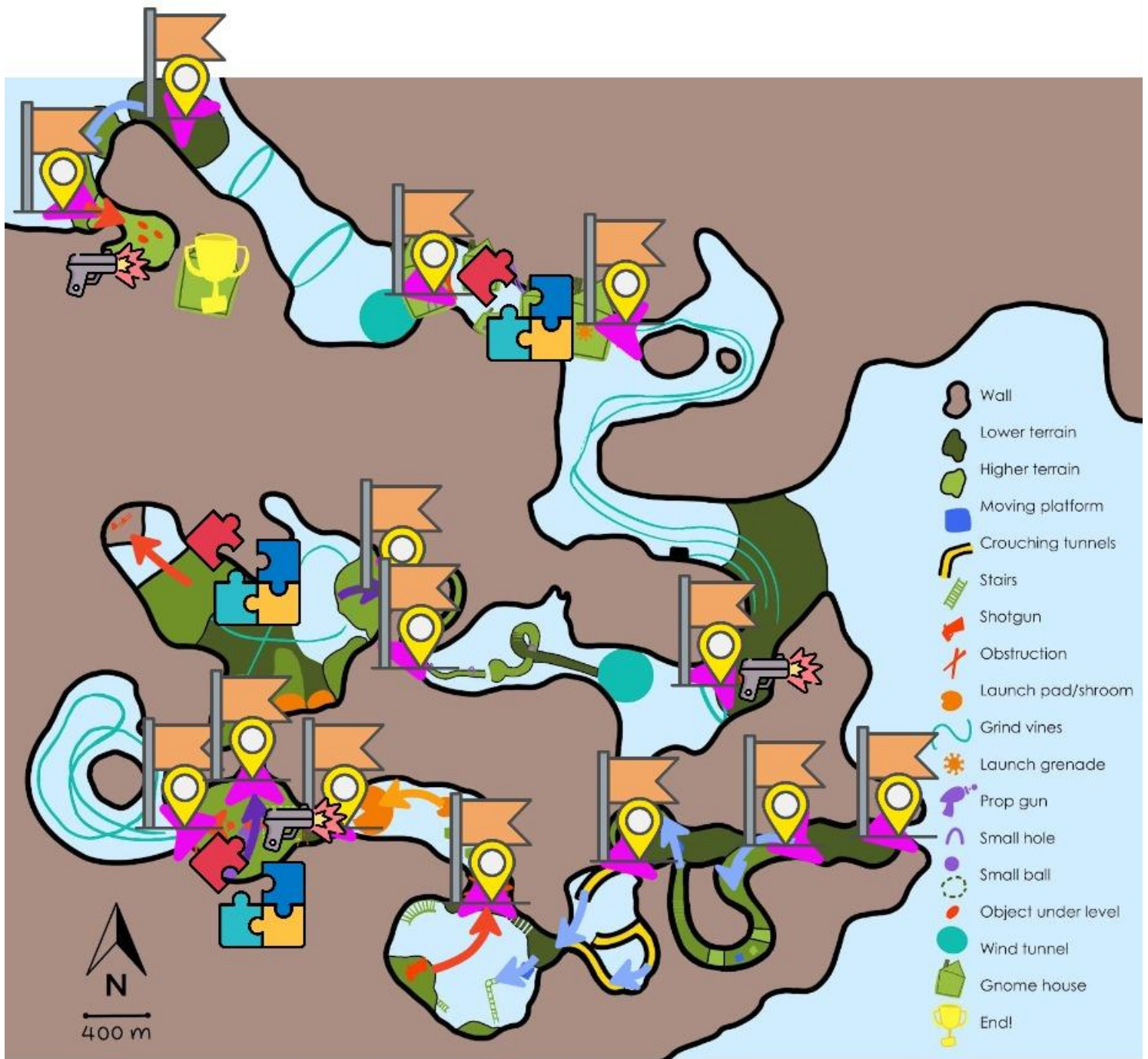| Object	Height (cm)	Canyon	Cave	Princess Loft	Marble Course	Gnome Village	Mountain Peak
Fence	70	1					
Pillar	230	1	3				
Vault Wall	384	1					
Tunnel	140	1					
Prop Ball	60			2	2	3	
Impulse Wall	500					2	

Map

Map of Entire Level Documenting Key Features
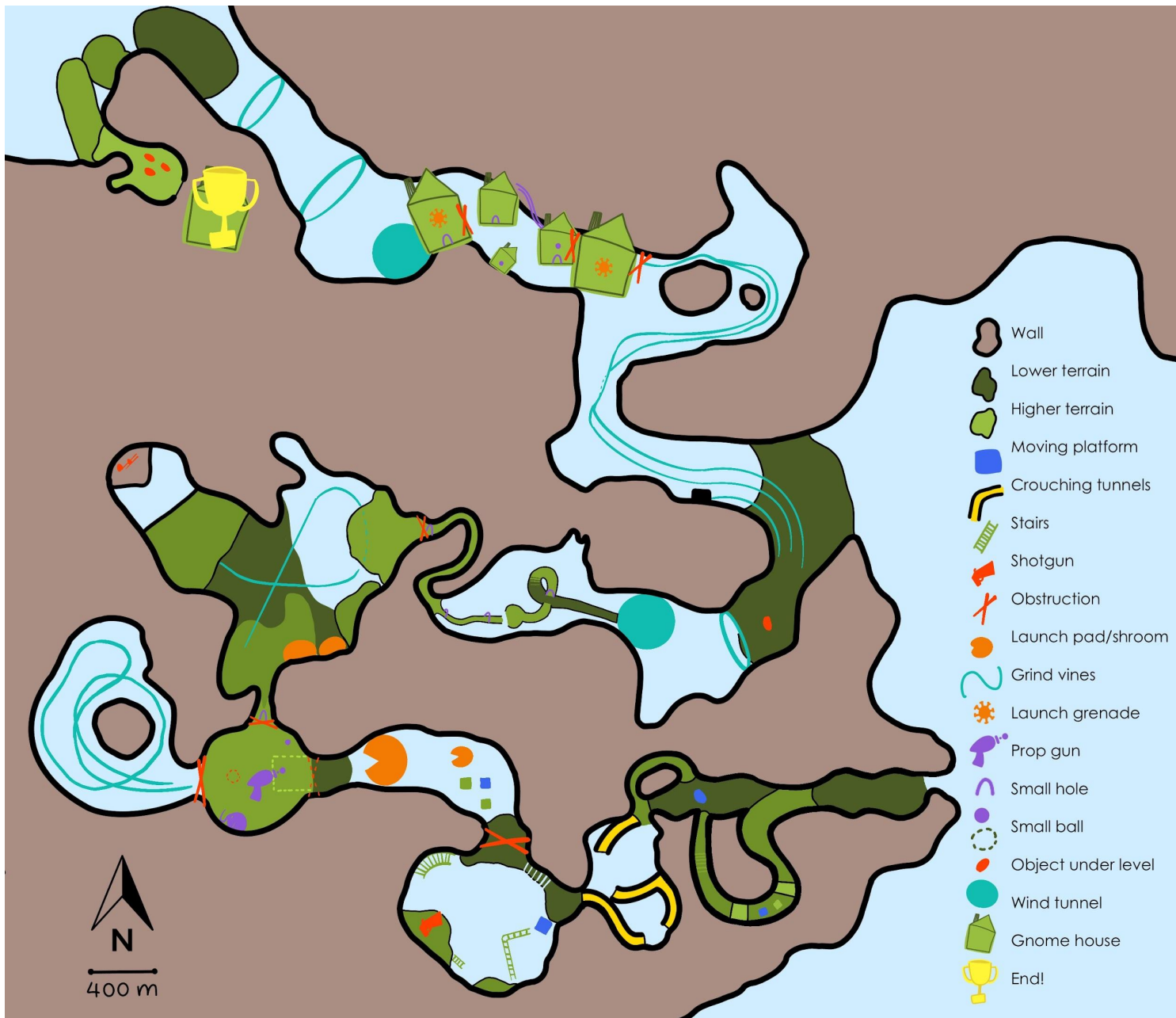
Map of entire level documenting where key features are found in the level and their relative location to each other.

Gameplay Map

Legend:

- Wall
- Lower terrain
- Higher terrain
- Moving platform
- Crouching tunnels
- Stairs
- Shotgun
- Obstruction
- Launch pad/shroom
- Grind vines
- Launch grenade
- Prop gun
- Small hole
- Small ball
- Object under level
- Wind tunnel
- Gnome house
- End!

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400 m

- Player Spawn and Checkpoint
- Puzzle
- Shooting
- Jump
- Shoot
- Launch
- Transform

Schedule

Requirement	Date
Project intentions	Sept. 14, 2023
It Takes Two case study	Sept. 21, 2023
Functional Playable Playground	Sept. 28, 2023
Level Design Document Work In Progress	Oct. 12, 2023
Diagrams / Maps	Oct. 19, 2023
Playable Greybox	Oct. 19, 2023
Level Design Document Update	Nov. 23, 2023
Markups	Dec. 7, 2023
Level Design Document Final	Dec. 14, 2023
Final Playable Level	Dec. 14, 2023