YardQuest Design Document

Phase I: Ideation

General Idea

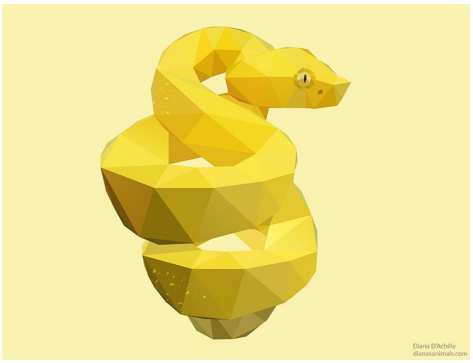
You are a kid who is playing in the backyard in his treehouse, and your mom (or parent/guardian) called yells to you to come in for dinner (to eat). The problem is that when you play in your treehouse and in your backyard, your imagination is greatly facilitated and it creates new spaces to explore. To get back to your house, you must navigate through the backyard and manage this while switching between your imaginative distorted state and reality. The goal is to get back home to eat dinner. You can only properly navigate back home when you have switch temporarily from your imaginative state to reality. And only when you have made it back, will you be completely out of your imaginative state and ready to eat dinner with your family in the real state.

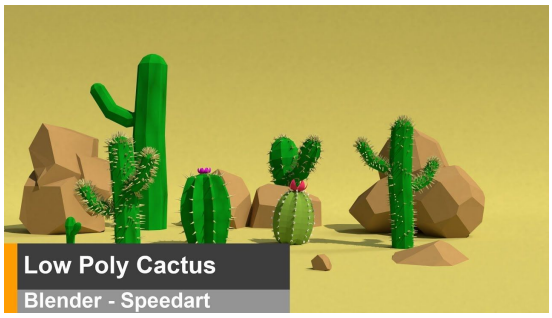
Inspiration

We reflected on our individual Unity scene projects that had the theme of “home” and brainstormed ideas that reflected the same ideas. Reminiscing on our childhoods, we all recalled playing outside and in our backyards. Our imaginations wild and unbridled, we would dream up imaginary worlds that we would play in until we got called back inside our homes by our parents. Thus, we settled on creating a “backyard” environment for our game. We took inspiration from the children’s TV show, Backyardigans, in which the play space is routinely augmented into a different setting, and popular Netflix series, Stranger Things, which depicts an alternate dimension. To create the sense of a game, we chose the goal to be home because that is where you are with familiar people and places.

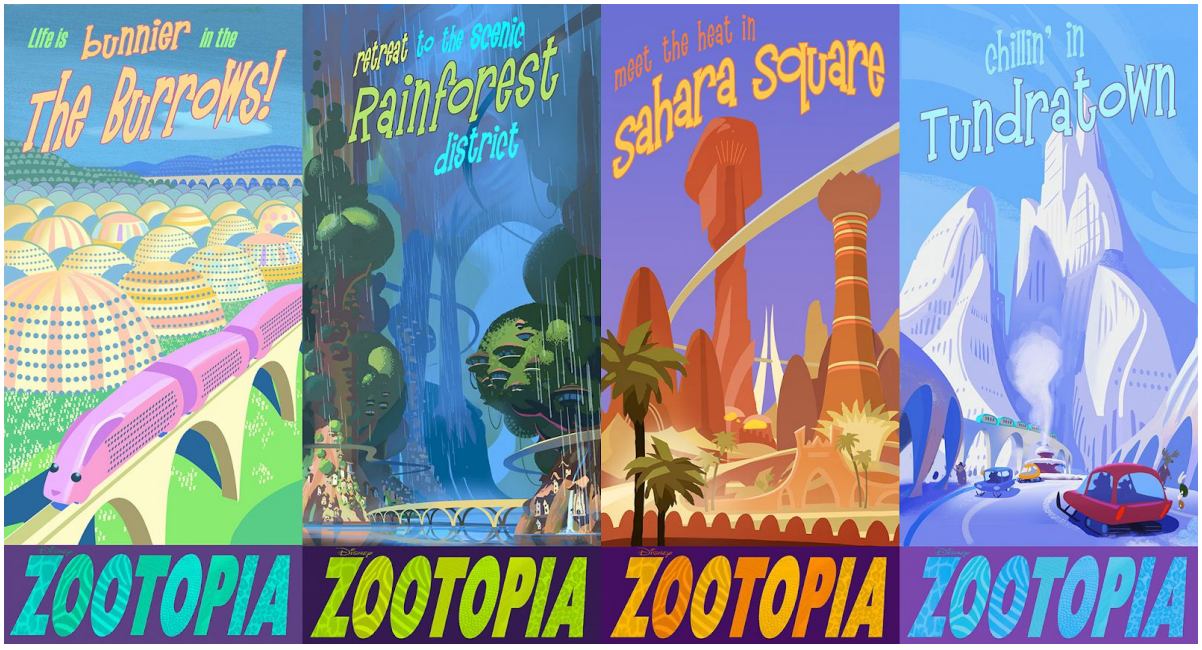
Aesthetics

We knew that we wanted the style of the game to be somewhat whimsical and cartoon-like, but we also wanted this type of aesthetic to be feasible and standardizable. We decided it would be best to create low poly models and scenes, since they are easy to create and gives an ode to more elementary cartoons and styles of drawing.
Below are some examples of low poly models for each zone and respective models we wanted to create.


Diana D'Achille
dianasanimals.com


Low Poly Cactus
Blender - Speedart

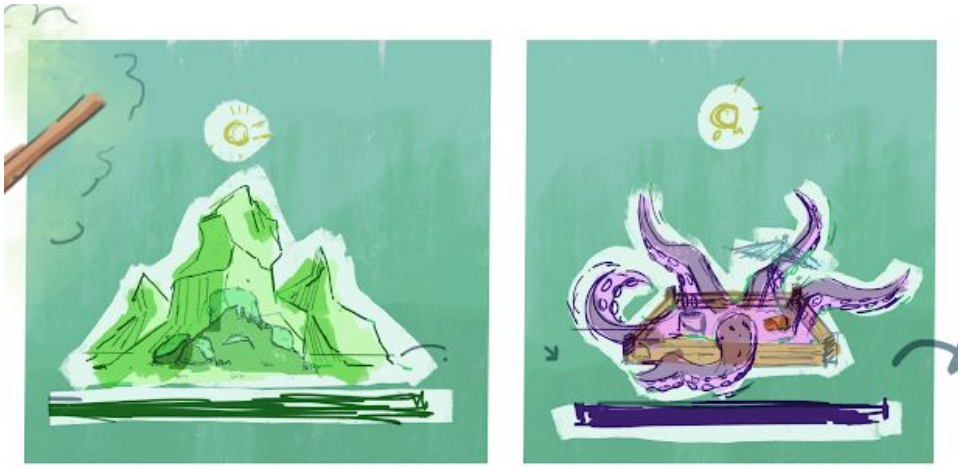

Level: Trip02_Water (Persistent)


Life is bunnier in the
The Burrows!
ZOOTOPIA
retreat to the scenic
Rainforest
district
ZOOTOPIA
meet the heat in
sahara square
ZOOTOPIA
chillin' in
Tundratown
ZOOTOPIA

Game Play

The playable area will be set up in three, mostly linear zones. The player starts at the treehouse, which is the farthest element away from the house, which is the destination. The player must navigate through the different elements of the reality backyard, which are each transformed into their respective imaginary worlds. The player will have to escape enemies, find token “trigger” objects that allow them to see glimpses of their backyard reality, and navigate through all three zones in order to make it home in time for dinner.

Concept images



The player will begin inside the Treehouse, but once they step foot into the backyard, they will immediately enter the imaginary world of the Sandbox, which will be depicted as a desolate and expansive Desert.

The zones will be broken up into the following:

The Sandbox/Desert
The player will encounter desert objects such as tumbleweeds, cacti, and, of course, sand. Somewhere in the desert they will encounter a household object from their reality (sand shovel and bucket in a sandbox). They must avoid the pacing blocks. From there, they will be permitted to move on to the next conquest.

The Swimming Pool/Ocean
The player will now be floating in what seems like an empty ocean. They must avoid getting attacked by a shark nearby. They should look for a life preserver to trigger a glimpse of their reality. If they find this object, they will advance to the final zone.

The Herb Garden/Forest
The player is almost home, and they can basically smell dinner, but they must navigate through the large trees and seemingly endless paths throughout the forest. They must find the rake and watering can. These items will bring them back to their herb garden reality and back home for good.

Potential Challenges

Before we began creating elements and scripting, we determined that we would likely encounter challenges in the following elements of our project: transitions between these "missions", triggers between imaginative state and "real" state, and the distortion effect (what it might look like and how to implement it).

Work Distribution

While tasks may be shared among all team members, we have appointed the following main elements of the project to a respective team member:
Video and game audio - Camille
Art/design and documentation- Parinia
Game implementation - Josh
Website and documentation - Beatrice

Phase IIa: Prototyping Zone I

For our first in-class prototype, we decided to create only the first zone, the Sandbox. Testing out elements in the scene and triggers between scenes is necessary to solve bugs before implementing the other zones which will be built similarly.

Task Distribution

Maya elements and modeling

- Beginning treehouse - Parinia
- Desert Zone
    - Multiple cacti variations - Parinia
    - Sandbox, shovel, bucket, sand - Camille
    - Animated snake and tumbleweed - Beatrice

Unity and scripting

- Zone changes and reality glimpse triggers - Josh

Website

- HTML/CSS skeleton, documentation until present - Beatrice

Challenges

Maya elements and modeling

Computer issues with Maya
Animation issues with snake

- How to remove CV curve used to create snake shape?
- How to ensure that animation gets exported with the .mb file?
- How to implement Maya animation in Unity?

Unity and scripting

Allowing the player to end up back in the same location they started with after the reality glimpse is over

Website

Adding navigation sections

Phase IIb: Prototyping Zone II

Task Distribution

Maya elements and modeling

- Life preserver - Parinia
- Treehouse - Parinia
- Shark fin - Camille

Unity and scripting

- Low-poly water in Unity
- Implementing boat

Website

- New HTML/CSS template to explore

Video

- Begin compiling screenshot videos of progress and video interviewing

Audio

- Camille to record audio of mom for game

Challenges

Main challenges in Unity

- There is a boat that the character moves to reach the life preservers, and having scenes of getting in the boat and out of the boat would be interesting. Once the player has done everything, they would get out of the boat, but there was trouble coding the GetOut() functionally, so the player would be stuck in the zone. The fix was to change it so that it would work in a similar way to the other zone with triggers to the next scene.

Video

- Since we all had very similar inspirations for the game that we also mentioned in our video interviews by Camille, she had to edit out some repetitive parts for the sake of time in the video. This will make the final product more cohesive and interesting.

Website

- After switching to a new HTML/CSS design template, Beatrice had to tweak many of the HTML structure and CSS that was pre-defined in the template in order to properly fit all of the content relevant to YardQuest.

Phase IIc: Prototyping Zone III

Task Distribution

Maya elements and modeling

- Forest Zone
    - Forest pack from Unity Asset Store
    - Low Poly environment pack
- Back of house - Parinia
- Box/enclosure for fence (adapted from unity assets)
- Various herbs and plants for herb garden (adapted from unity assets)
- Rake - Parinia
- Watering Can - Parinia

Unity and scripting

- Gameplay change
- They collect the objects (2) and then can see the reality
- Objects are pickup objects, then they cango to reality zone
- Leave desert to reality zone, theni n sandbox area then see the pool and finally transition to the water/pool

Website

- Transfer content over to new template
- Team bios/section
- Sample media screenshots/process

Challenges

Unity and scripting

- Cameras work, getting them to work and sequencing is difficult
- Synchronizing camera animations with the audio - if audio runs for x amount of time and animation is shorter, then animation loops again
- Making sure they trigger where they're supposed to trigger - takes run throughs of the game to check the trigger points
- To-do at this point: dialogue boxes for instructions
- Sub-animations were hard to synchronize, adding something can mess up something else in the game
- As long as the animations you have work with the existing scripts - animated directly in Unity

Website

- Keeping content updated with new developments in the game implementation
- Reformatting the HTML files and customizing CSS to fit aesthetic of YardQuest