

# Preservation

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DESIGN DOCUMENT  
VERSION 0.6  
JUNE 09, 2016



# INDEX

## [INDEX](#)

### [VERSION HISTORY](#)

[Version 0.1 – April 28, 2016](#)

[Version 0.2 – May 04, 2016](#)

[Version 0.3 – May 12, 2016](#)

[Version 0.4 – May 19, 2016](#)

[Version 0.5 – May 26, 2016](#)

[Version 0.6 – June 09, 2016](#)

### [DICTIONARY](#)

#### [GAME OVERVIEW](#)

[Game logline](#)

[Gameplay synopsis](#)

#### [GAME DETAILS](#)

[Description](#)

[Game genre?](#)

[Is this single-player or multiplayer game?](#)

[What do I control? How many characters?](#)

[What is the main focus?](#)

### [AUDIENCE, PLATFORM, AND MARKETING](#)

#### [FEATURE SET](#)

#### [THE GAME WORLD](#)

#### [GAME CHARACTERS](#)

[Overview](#)

[Character creation](#)

[Enemies and monsters \(Animals\)](#)

[Life System:](#)

#### [USER INTERFACE](#)

[Controls](#)

[Screens](#)

[Example of screens:](#)

#### [OBJECTS](#)

[Overview](#)

[Equipment](#)

[Other](#)

## [MUSIC AND SOUNDS EFFECTS](#)

[Overview](#)

[What kind of style will be used in the game?](#)

[Game Logo Prototype](#)

[Needed building models](#)

[Conceptual Scenery Arts \(Reference only\)](#)

[Character models](#)

[Animal Prototype Artworks:](#)

[Objects](#)

## [RESOURCES & LINKS](#)

## VERSION HISTORY

### Version 0.1 – April 28, 2016

- First version of the document. Template based on link noted in “Links” section
- Removed “Mods” and replaced a few sections are based on the template in *Game Design Workshop* by Tracy Fullerton.
- Added basic game design idea about zoo keeper game

### Version 0.2 – May 04, 2016

- Removed enemy mechanics
- Added objects
- Updated game mechanics/dictionary
- Got rid of level 3 and some upgrades
- Added time shift mechanics
- Removed unused sections
- Added backlog section
- Added user controls
- Added tentative number of screens
- Added synopsis

### Version 0.3 – May 12, 2016

- Fixed all typos
- Added more details about animal behaviors
- Added potential level 1 design sketch
- Filled in unique section
- Reduced animals per level from 3 to 2
- Updated objects section

### Version 0.4 – May 19, 2016

- Updated game details - comparison
- Updated user control
- Updated win condition
- Updated power-ups
- Updated level section
- Updated animal behavior section
- Updated art work:
  - Added game logo prototype
  - Scenery prototypes (& puzzles)
  - Background
  - Hero animation states

- Animals/Objects

### **Version 0.5 – May 26, 2016**

- Bug fixes & improvements after alpha testing
  - Maze bug
  - Scan bar decay
  - Scan beam display
  - Scanner position
  - Animal sprite error
  - Moonwalking
  - Visual instruction with key labels
  - Puzzle guidance
  - Better font display
- Updated gameplay description
- Updated hero behavior
  - Scanner now follows hero on top of his head, instead of holding in his hand
- Updated user control
  - Arrow keys
  - Hidden controls
- Updated power-ups
- Updated animal behavior section
- Added Level 2
- Added background music and sound effect
- Updated art work:
  - Added team & game logo
  - Updated actual gameplay screens in level 1 & 2
  - Updated hero with his scanner
  - Updated animal sprites

### **Version 0.6 – June 09, 2016**

- Animal description modifications
- Added hidden control
- Updated in game screens
- Updated audio
- Updated particle effects
- Removed backlog, single player game, and misc page.
- Updated resource and links page

## DICTIONARY

Power-Up: A one time use ability

Upgrade: A persistent ability applied to the character

Level: Typically, a scene in unity

Time Shift: Switching between two active world states

# GAME OVERVIEW

## **Game logline**

2D Horizontal Scroll Platform Action Game.

## **Gameplay synopsis**

Travel back through time and space to exotic and remote locations in order to find and save animals extinct in your time. In these locations you will have to navigate treacherous chasms and use your wits to overcome obstacles. Keeping your Scanner locked on to your animal subjects is vital to safely transporting them back to the future, but they may not take kindly to your presence. Dodge and avoid their aggressive reactions, and save as many animals as you can.

## GAME DETAILS

### **Description**

In the year 20xx, the world has suffered the extinction of all the animals. You, a zoologist, must find a way to repopulate the planet. Fortunately, the professor has just finished the time displacement device. Now you must go retrieve members of extinct species. Save the planet! As the zoologist goes back through various points of time, he will be faced with difficult challenges. There will be different kinds of poachers who behave differently in every time period who want to do everything in their power to hurt these animals. The zoologist must stun or avoid these poachers in order to save all of the captivated animals from danger. Throughout the zoologist's adventure, various upgrades will be made available to help him throughout his journey through the perils of time travel.

### **Game genre?**

~~Combination of a platform action game~~ Platform puzzler

### **Is this single-player or multiplayer game?**

Single-player

### **Is this 2D or 3D?**

2D

### **Where does the game take place? (world)**

The game world takes place in various points of time. The time traveling zoo keeper visits 2037 at the Arctic, 1660's at Madagascar

### **What do I control? How many characters?**

Player controls the only current playable character, the zoologist.



### **What is the main focus?**

To help the time traveling zoo keeper go back in time to stop the extinction of various wild animals by scanning the animals to save its data with the zoo keepers futuristic animal scanner and eventually reproduce them back in the future.

### **How long the game lasts? Or how long game matches last?**

the game will approximately last 5 - 10 minutes depending on the skill level of the player.

### **Comparison**

#### Super Mario

In Super Mario, players adventure and chase only because of a princess, involves too little positivism. The gameplay in Super Mario is often violent, which involves bullying little animals and creatures, or getting chewed by the Piranha plants; in Preservation, players dedicate themselves to defend wild lives against animal cruelty. Also, no animals would be harmed or murdered in Preservation.

#### Megaman

Megaman emphasizes heavy action gameplay, especially for the boss stage where you have to memorize the attack pattern, hit and dodge carefully. Players must also adapt various types of weapon and different powerups throughout the game, in order to clear the game effectively; Preservation embraces a more casual gameplay, and requires a significant lighter amount of skillset as it provides only one type of "attacking" (scanning). There will be no boss stage in the game, and it does not require player to acquire powerups necessarily.

#### Metroid

Metroid, similar to Megaman, emphasizes heavily on action basis. It also involves various difficult puzzle solving, in combination with strong skillset in controlling the hero character, in order to clear the game. In addition, as the main enemy types in Metroid are alien invaders, or space pirates, they usually have horrifying and non-adorable game art; Preservation requires a significant lighter amount of skillset, is non-violent, and has a lot of adorable art. Preservation also involves less difficult puzzle solving.

### **What is unique?**

This game combines the usual platforming experience while giving the player a sense of saving animals. This game subconsciously alerts the player that animal extinction is happening and is a problem.

### **Why create this game?**

To create an interesting and interactive in-experience for all age range potential players. To bring some awareness to the extinction of animals.

# AUDIENCE, PLATFORM, AND MARKETING

## Target Audience

All ages

## Platform

1. Fun and entertaining characters and world
2. Strategic and quick gameplay
3. Multiple upgrades available throughout the game to enhance gameplay

## Top Performers

- Super Mario Bros
- Megaman
- Metroid

## Feature comparison

Super Mario Brothers:

The point of this game is to essentially go through multiple worlds defeating Bowsers henchmen until you reach the final world where you defeat Bowser and rescue the princess. The biggest difference between Super Mario Bros and Preservation is that, our game focuses on rescuing multiple animals in different eras from the different poachers that exist in each era using futuristic gadgets and upgrades. We are saving animals from going extinct, where as in Super Mario Brothers, the brothers are giving a sole princess. They are similar in the sense of game mechanics where the game is a 2D platformer and the main character goes through each level trying to defeat or avoid obstacles that get in the main character's way.

# FEATURE SET

## General features

- Single-player-controllable protagonist/hero (zoologist)
- Various potential upgrades will be available to the player at different levels:
  - Double jump
  - Fly
  - Freeze
  - Invisibility
  - etc.

## Gameplay

~~Gameplay is going to be a mix of a 2d platformer, and a 2d shooter. The player is going to have to jump onto surfaces, avoid enemy attacks, stun the enemies with their stun gun, and free animals from the traps. Currently there is going to be a boss, or miniboss at the end of each level that will be more challenging, but will give the players an upgrade for future levels.~~

2D Third Person "Shooting" + Puzzle Solving Platformer. Throughout the game, player has to adventure and explore the level, aim and scan ("Shoot") animals, in order to collect their generic data. Player would also have to solve various types of puzzles in order to proceed, or to collect rare animal species. Player would automatically gain a new powerup after finishing each level, which would help proceeding the next level significantly.

# THE GAME WORLD

## Overview

### Key locations

- Level 1: Arctic, 20XX
  - Difficulty: Easy
  - Roaming Animals
    - Arctic Fox
    - Polar bears
    - Puffins
    - Tiger
  
- Level 2: Rainforest, 1660s
  - Difficulty: Medium
  - Roaming Animals
    - Owl
    - Forest Fox
    - Monkey

### Travel

- Player will be able to move around the world with the standard arrow keys and space bar for jump.
- There will be special platforms for the player to jump on to reach higher places on the given map.
- There will be upgrades for players to allow them double jump, ~~or fly~~ across terrains.
- Player will be able to fast-forward or rewind time to change terrain to solve puzzles

### Scale

The in-game stages are all in normal world scale. Hero and enemies are mainly normal sized humans

### Objects

- Upgrades
  - Double jump
  - ~~Fly / invisibility / tree climbing/ freeze~~

# CAMERA

## **Overview**

The camera will be a side scrolling camera.

# GAME CHARACTERS

## Overview

The protagonist will be the zookeeper, and the enemies would be animals.

## Character creation

Not supported, there is a fixed playable character.

## Enemies and monsters (Animals)

### Level 1 Arctic

- Arctic Fox
  - Scanner Bar: 3 seconds
  - Behaviors
    - **Relax** - Will just roam on its platform going back and forth ~~with speed of [ ]~~.
    - **Surprised** - When player is in its sight, fox will charge at player, jump, and burrow away.
- Polar Bear
  - Scanner Bar: 5 seconds
  - Behaviors:
    - **Relax** - Will roam on its platform going back and forth ~~with a speed of [ ]~~.
    - **Surprised** - When player is in sight, polar bear will charge at the player ~~with a speed of [ ]~~ until he leaves its sight.
- Puffin
  - Scanner Bar: 3 seconds
  - Behaviors:
    - **Relax** - follows a fixed flight path going left and right
    - **Surprised** - if the player comes under the bird at any point, the bird will drop an egg on the hero causing damage
- ~~Walrus~~

~~■ Scanner Bar: 5 seconds~~

~~■ Behaviors:~~

~~● Relax~~

~~● Surprised~~

- **Level 2 Jungle**

- Forest Fox

- Scanner Bar: 5 seconds

- Behaviors:

- **Relax** - Will roam on its platform going back and forth with a speed of [ ].

- **Surprised** - When player is in sight, the tiger will charge at player with a speed of [ ] until player leaves its sight.

- ~~Brown Bear~~ Tiger

- Scanner Bar: 5 seconds

- Behaviors:

- **Relax** - Will roam on its platform going back and forth with a speed of [ ].

- **Surprised** - When player is in sight, bear will charge at player with a speed of [ ] until player leaves its sight.

- Monkey

- Scanner Bar: 3 seconds

- Behaviors

- **Relax** - Just sits on platform doing nothing.

- **Surprised** - When player is in its sight within [ ] distance, monkey will throw bananas toward player

- Owl

- Scanner Bar: 3 seconds

- Behaviors:

- **Relax** - follows a fixed flight path going left and right

- **Surprised** - if the player comes under the bird at any point, an egg will be laid on the hero causing damage.



### **Life System:**

- **Player**
  - Status space on the top, indicating the current health by health bar, as well as current lives.
  - Hero would lose health if the animals attack the hero successfully.
  - If hero's health reaches 0, hero would be respawned at the start position and loses one life; if hero has 0 lives, the game is over.
  
- **Animals**
  - Animal would have a scan bar ("health bar") on top of their in-game animation.
  - While hero scans on the animals, the scan bars of the animals would be filling up; when scan bar is full, the animal would be fully scanned and teleported to the future ("disappear")
  - Scan bar drops gradually if hero stops scanning on the animal.

# USER INTERFACE

## Overview

User will be able to select which level they want to play on, all levels will be open. The possibility of completion of the more difficult levels may require various upgrades that are only acquired from the easier levels. Player will be able to control the character using standard arrow keys. Main menu will be multiple buttons designating the different levels. There will be some sort of achievement board or page showing the achievements that the current player has gotten.

## Details

- **Main Screen Menu:**
  - Stage Select
  - ~~Achievements/Scoreboard~~
  - ~~Audio Settings~~
  - Help Page
  - Credits Page
- **Help Page:**
  - List of all key bindings for every corresponding actions, (i.e. move, jump, freeze, other potential special skills)
- **Stage Select:**
  - Currently planned to be a hub of sorts where after each level the player returns to this hub and can select a new level

- **In-game Screen:**

- Single layer UI that allows player to monitor their current stage level, completeness of the current stage, current owned upgrades, current hit points.
- No further layers of UI (such as equipment page, hero stat page, upgrades/skill page etc., except setting/esc menu)
- ~~Setting/help/esc menu that show up and pauses the game when player presses the "ESC" button. It should provide various options for player:~~
  - ~~Audio settings~~  
(two scroll bar for tuning background music or SFX volume; setting them on/off),
  - ~~Help on controls,~~
  - ~~A simple pop up window that indicates List of all key bindings for every corresponding actions,~~  
(i.e. move, jump, freeze, other potential special skills)  
(moved to main screen page)
  - ~~Restart current stage,~~
  - ~~Quit current stage,~~
  - ~~Cancel the menu, and return back to current game~~

## Controls

- **W / Up-Arrow / Space Bar** - Jump
- **A / Left-Arrow** - Move left
- **D / Right-Arrow** - Move right
- **Mouse Movement** -
  - Aim the scanner at animals
  - Change direction player is facing
- **Mouse Click** - Start the scanner

## Hidden controls

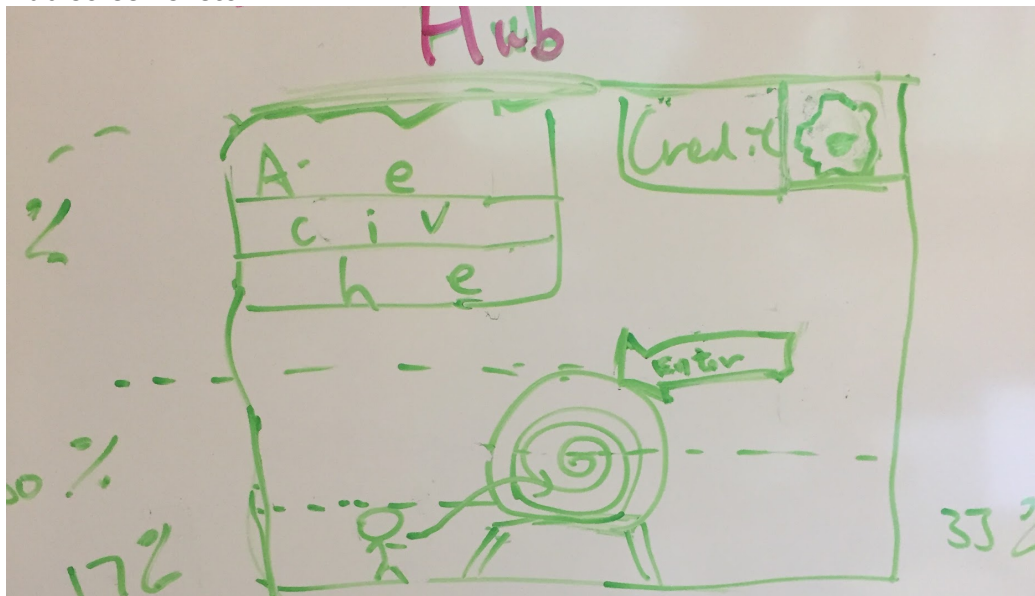
- **W / Up-Arrow + Space Bar** - Super Jump (**rare chance**)
- **W + Up-Arrow + Space Bar** - Space Jump (**very rare chance**)
- **A + Right-Arrow / D + Left-Arrow** - Moonwalking
- **Click "I" to toggle invincibility**

## Screens

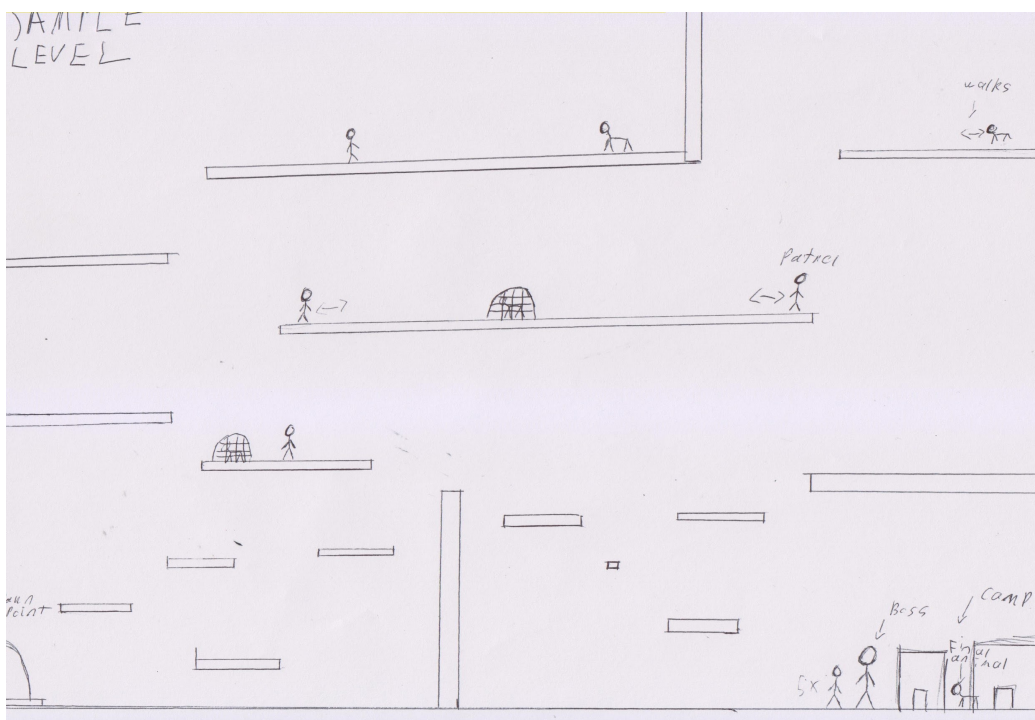
- Game menu screen
- Hub screen (Level selection screen)
- ~~Game pause screen~~
- Level 1 screen
- Level 2 screen

**Example of screens:**

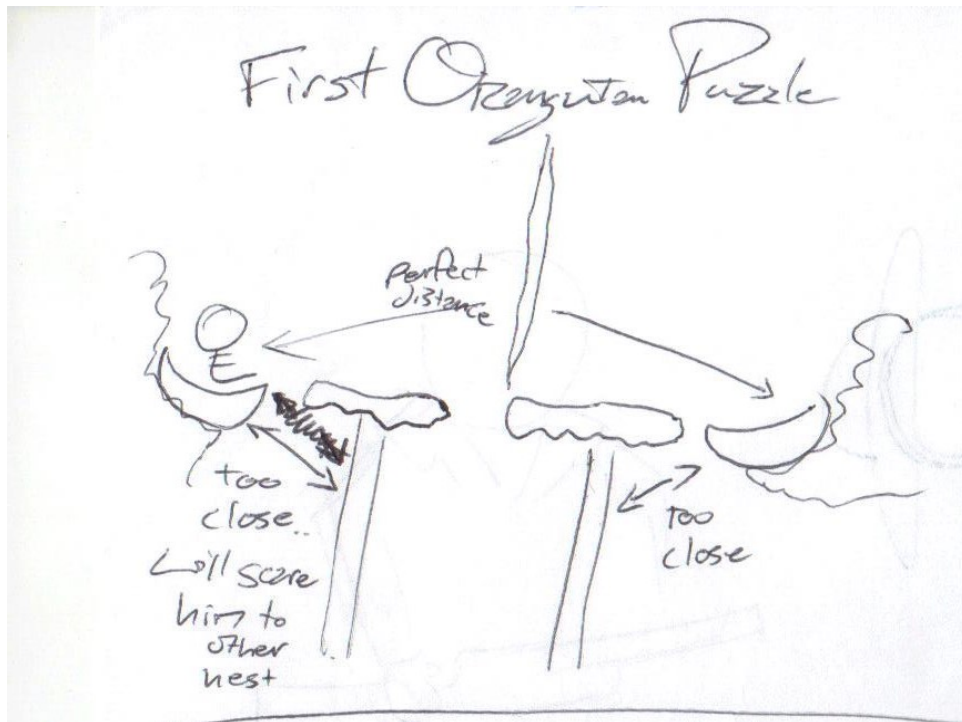
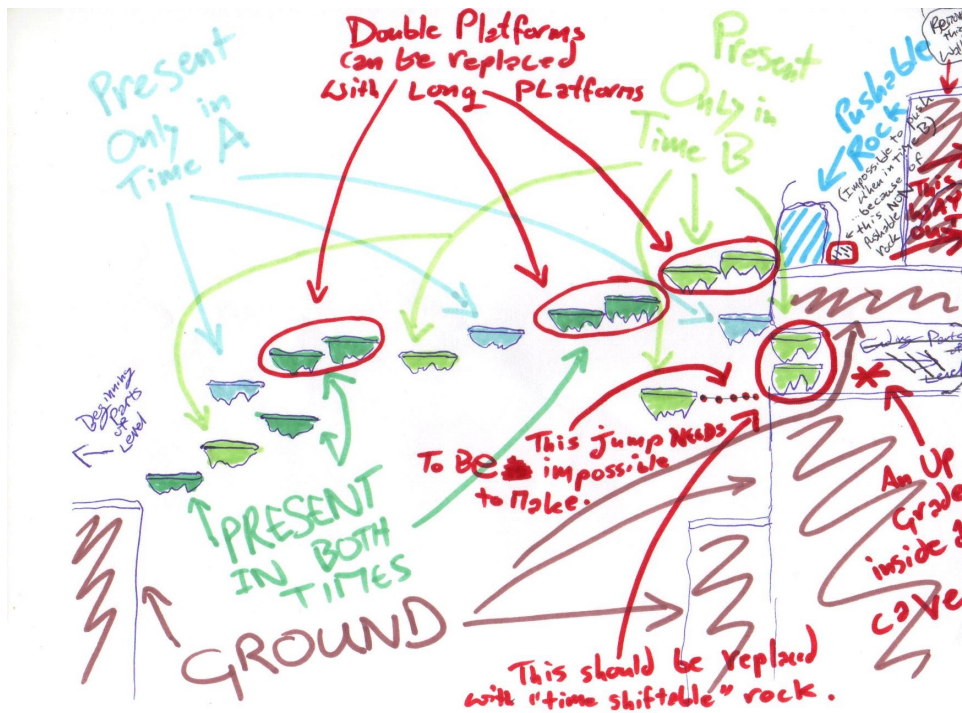
Hub screen sketch



Level prototype sketch

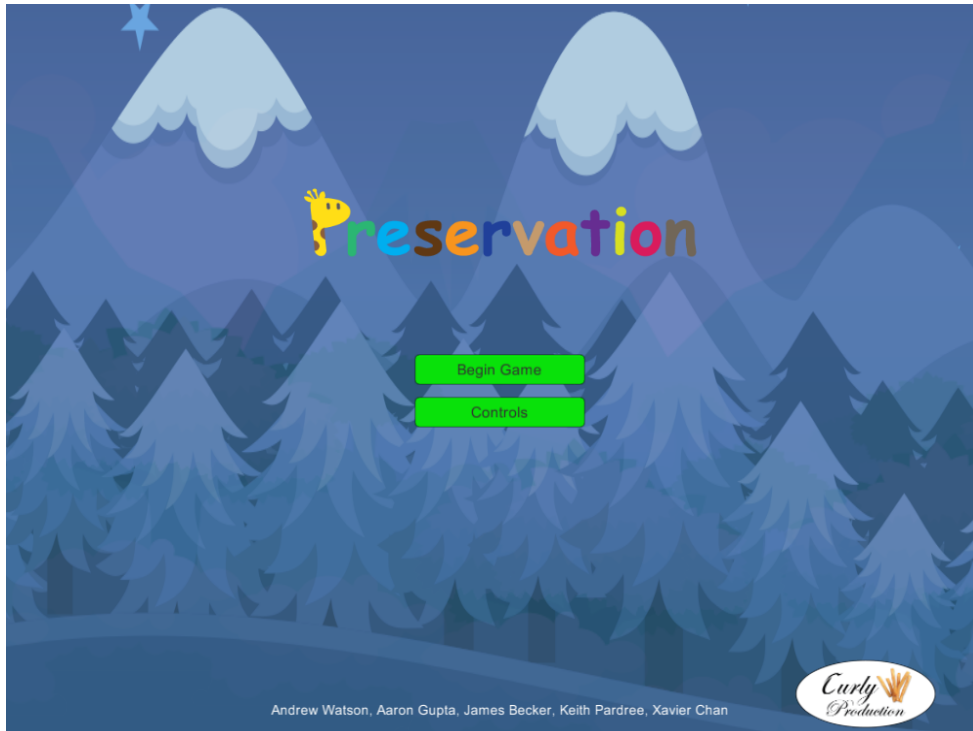


Puzzle ideas sketches

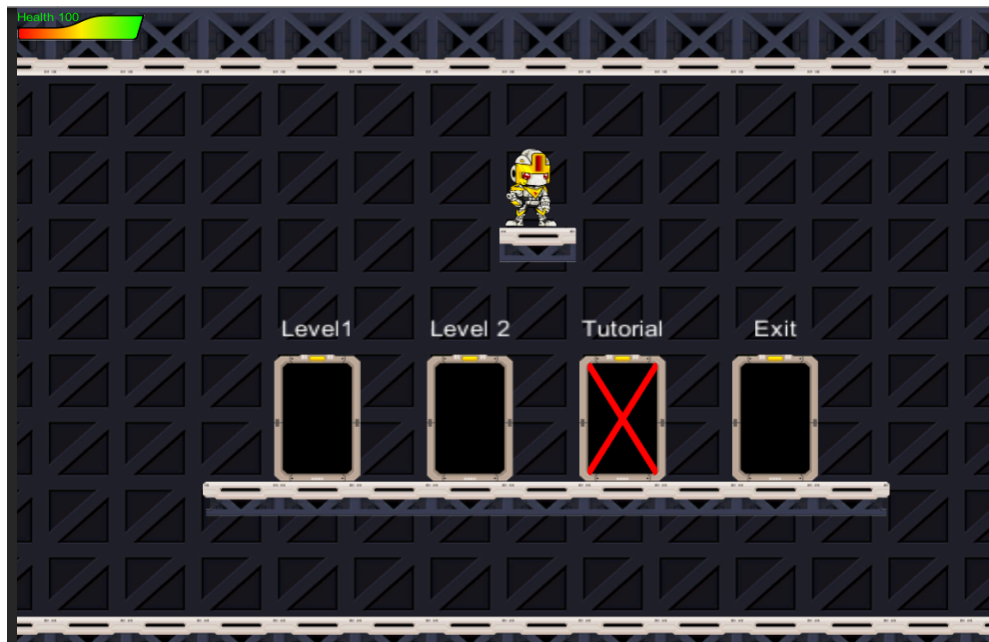


### Current In-game screens

Menu screen:



Hub:

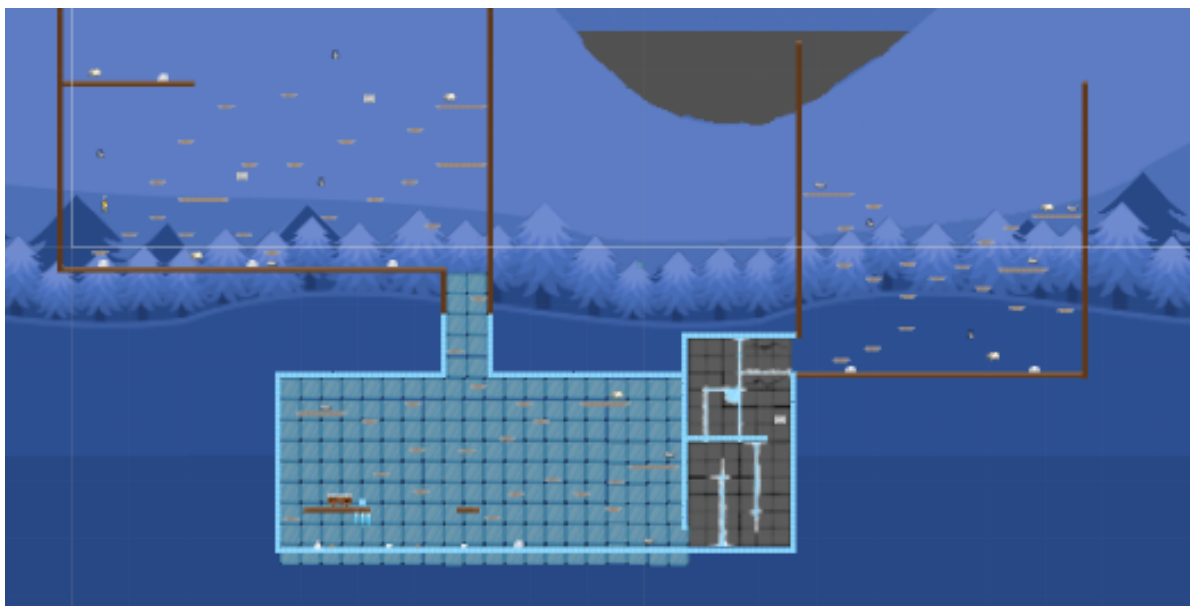


Level 1:

Gameplay:



Zoomed out look:

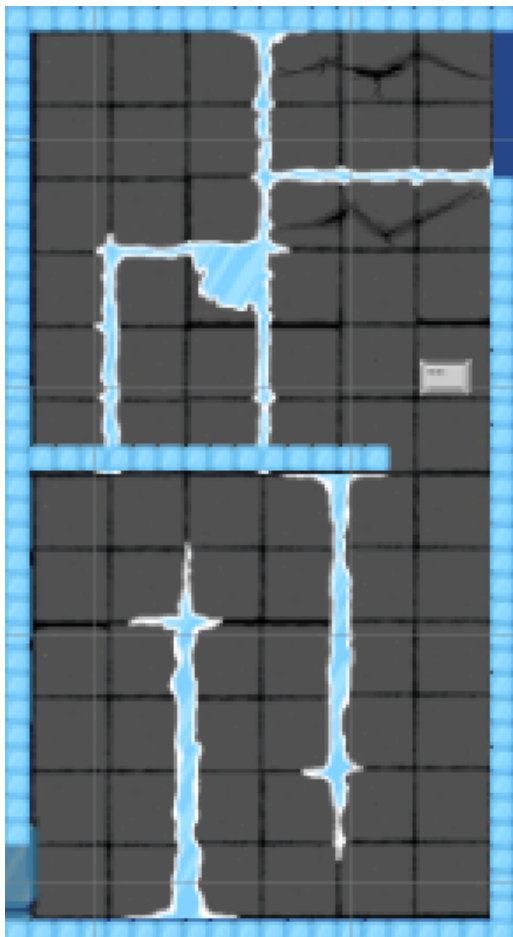


Puzzles in level 1:

Ice puzzle



Time shift maze

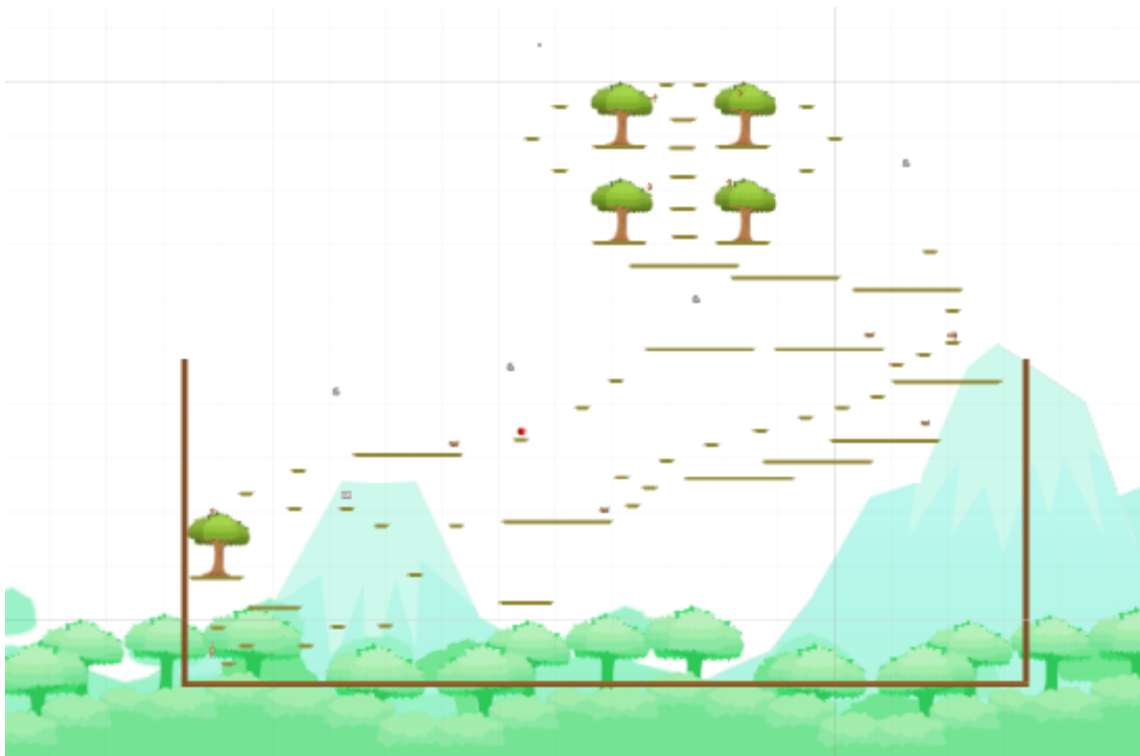




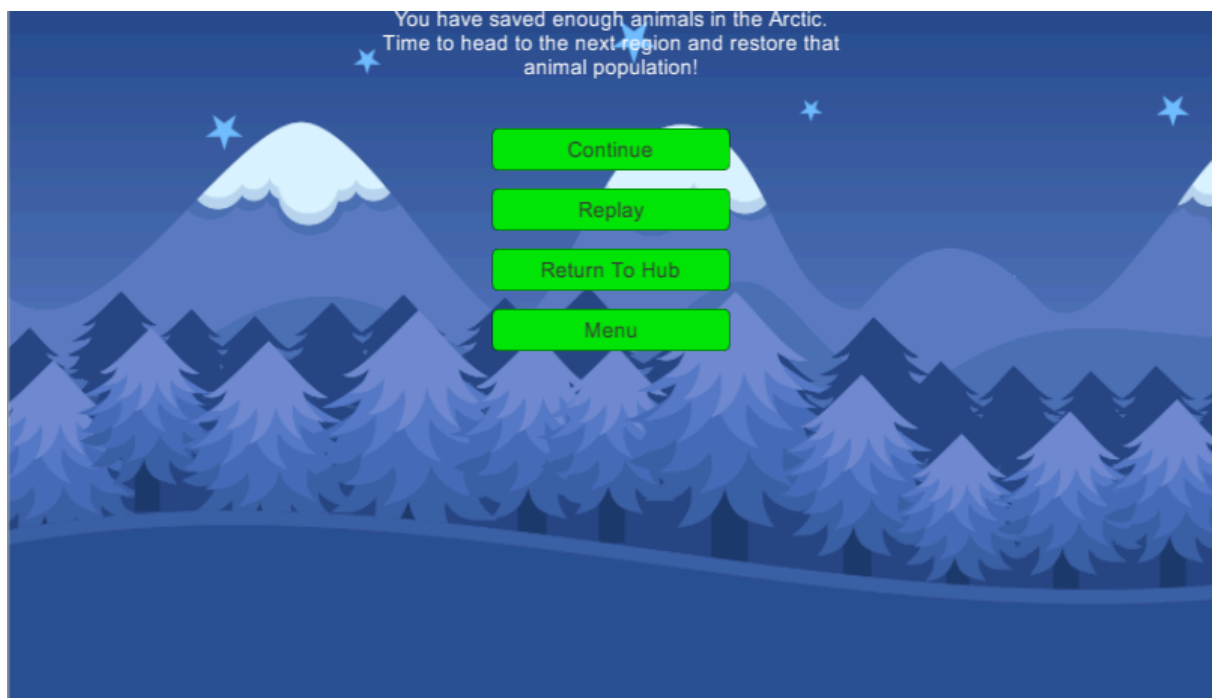
Level 2:



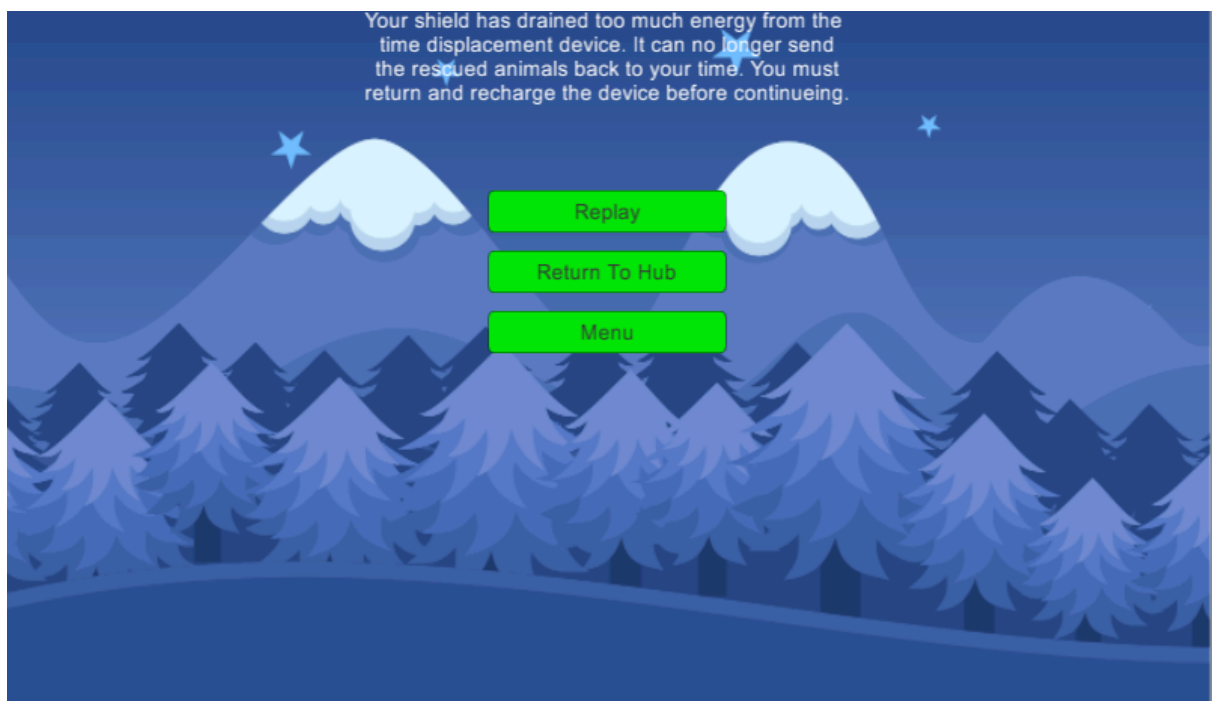
Zoomed out look:



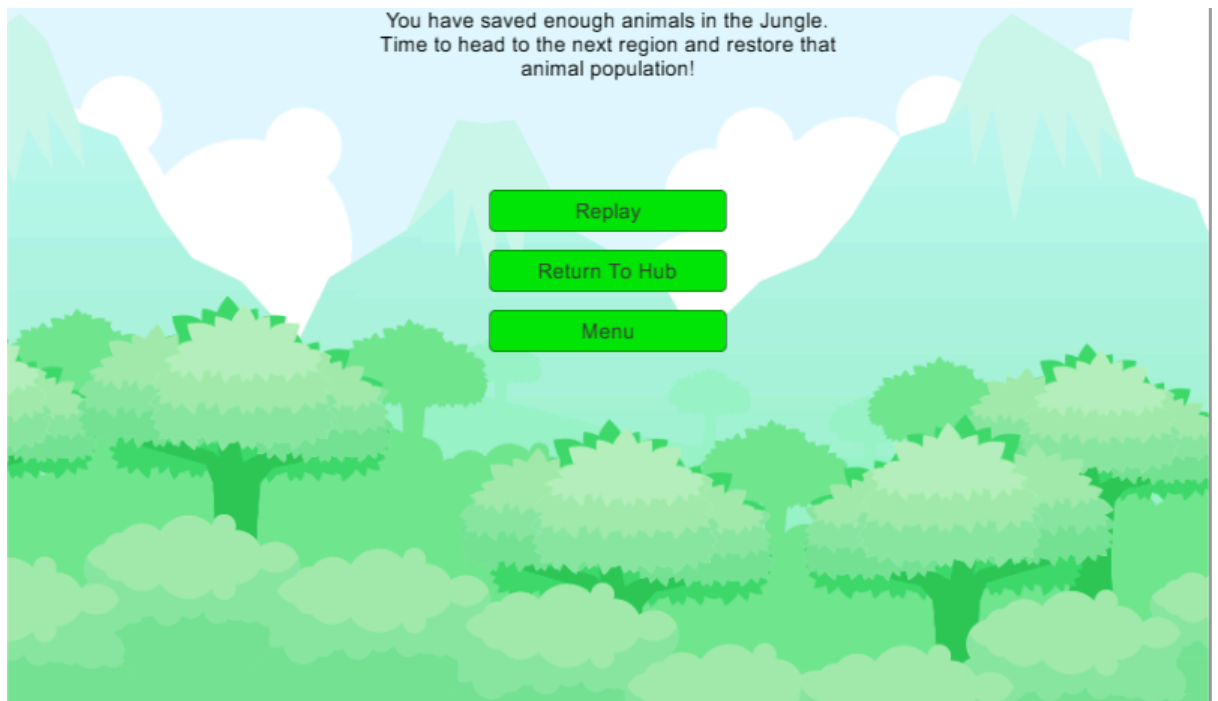
Win Screen Level 1:



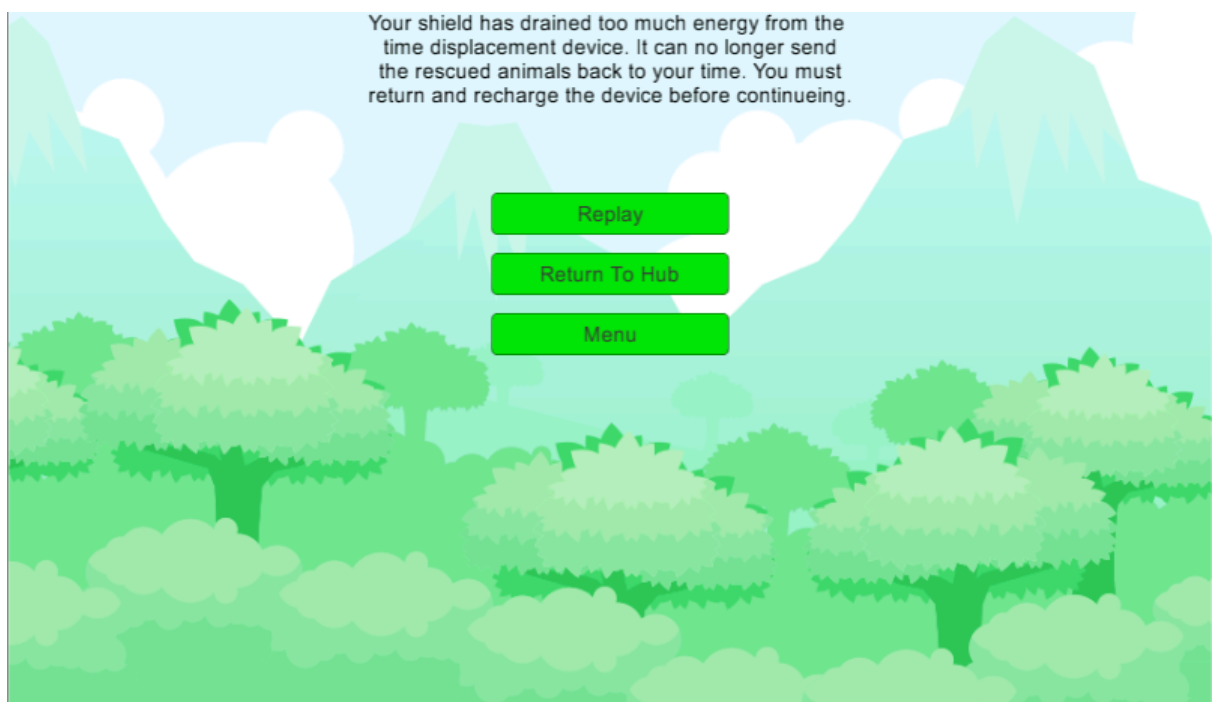
Lose Screen Level 1:



Win Screen level 2:



Lose Screen level 2:



# OBJECTS

## Overview

There will be various objects in each level that will help the player complete the level. This will come in the form of pushable blocks and trees to climb.

- Push-able Blocks

Description: In every stage there will be different push-able blocks that the player can push and stack in order to help solve different puzzles.

- Level 1 - Arctic
  - Ice blocks
- Level 2 - Jungle
  - Block with vines

## Equipment

- Animal Scanner

Description: Player scans animals for a specific period of time in order to save the data on the animal in order to recreate that animal in the future

## Other

- Powerup Objects

Description: Player will see various power ups throughout the world which he can gain by acquiring the powerup object.

# MUSIC AND SOUNDS EFFECTS

## Overview

There will be various sound effects throughout this game. Every level will have a distinct background audio related to the time frame indicated by the level. The attacking of the zookeeper will produce a single sound that will be persistent throughout every level. The various poachers will make different sounds depending on the level. There will be a separate background audio for the menu screen as well as the credits screen. Every individual upgrade will have a sound when they are activated.

**Note: All sound effects either created or used under creative commons license**

## Details

Title screen + Credit background audio:

Achievement room audio:

Hub screen audio: **Sci-fi Laboratory Ambience by Iwan Gabovitch**

Level 1 background audio: **Surreal Chase by PlayOnLoop**

Level 2 background audio: **Icy Town by PlayOnLoop**

Level 3 background audio:

Zookeeper attack sound:

Level 1 Poacher attack audio:

Level 2 Poacher attack audio:

Level 3 Poacher attack audio:

## Sound effects

Jump/scan sound

Double jump sound:

tree climbing sound:

Invisibility trigger sound

Freeze sound:

Fly sound:

## ART

**What kind of style will be used in the game?**

Cartoon

**Team Logo**



**Game Logo Prototype**



**Game Title**



### Conceptual Scenery Arts (Reference only)

Level 1:

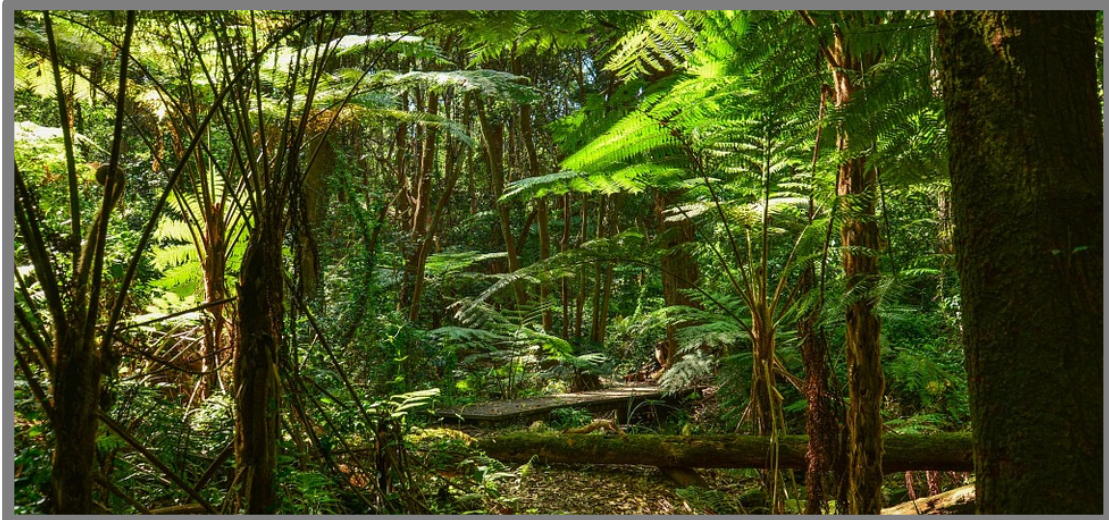
The arctic, year 2037



Reference: <https://pixabay.com/en/northern-lights-aurora-borealis-984120/>

Level 2:

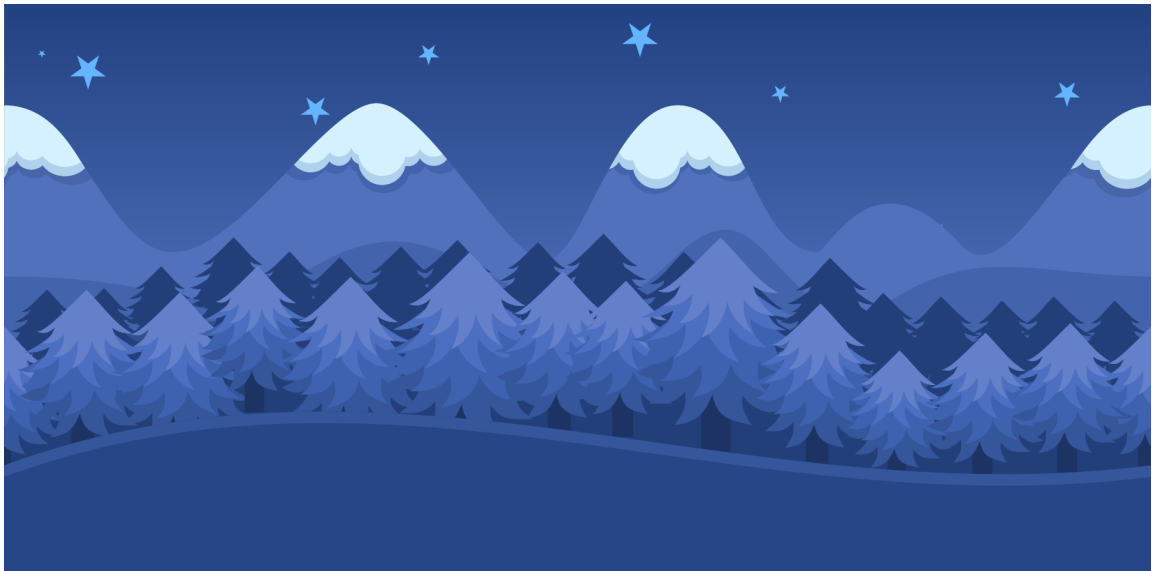
The rain forest, year 1660s



Reference: <https://pixabay.com/en/ferns-tree-ferns-australia-sydney-303016/>

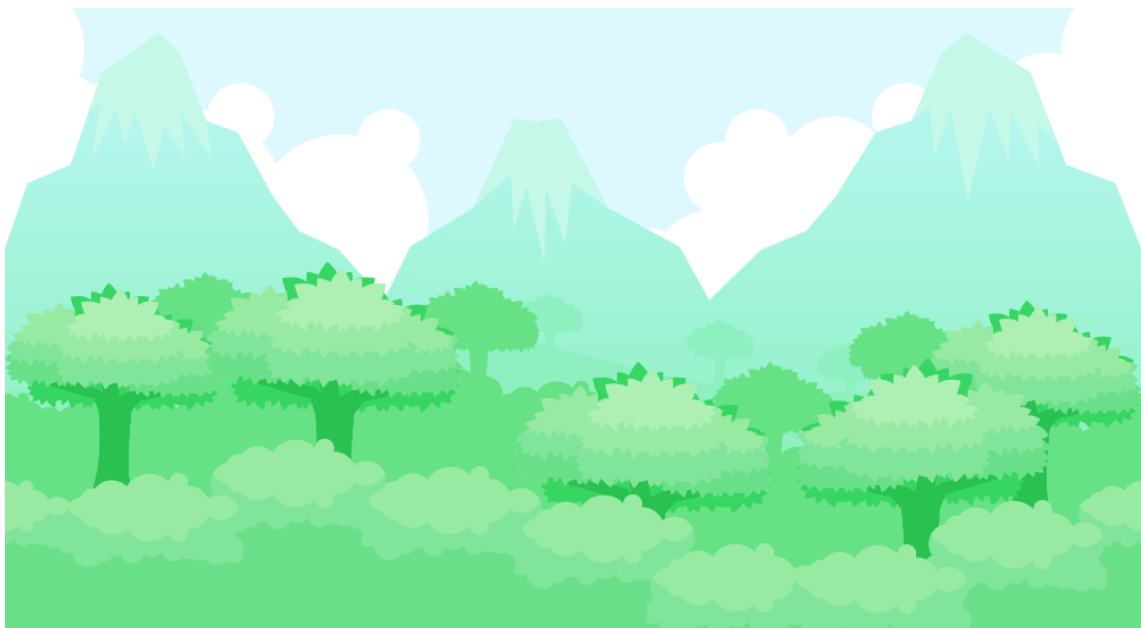
**Current Background Art:**

Level 1 - The Arctic:



Level 2

The rain forest, year 1660s



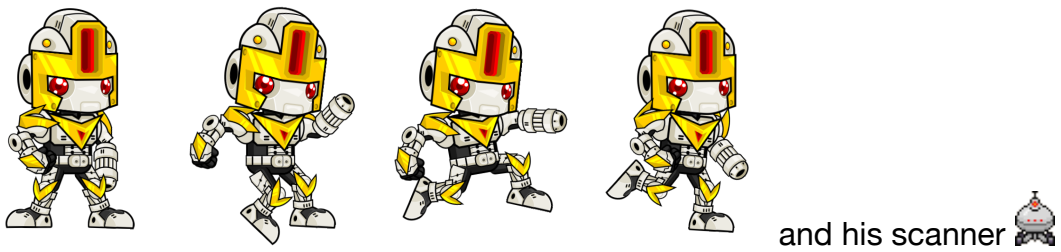


### Character models

Prototype Hero:



Current Hero (with different animation states: idle, in-air/jump, shoot, run):

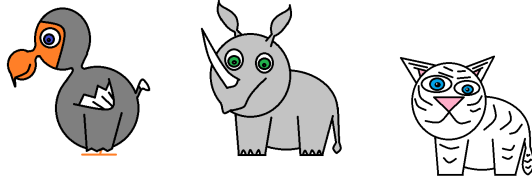


~~Prototype Peachers~~ [Discontinued]



### Animal Prototype Artworks:

~~Dodo bird/White Rhino~~ [Discontinued]



Level 1 Arctic: Arctic Fox/Owl/Polar Bear




Level 2 Rainforest: Monkey/Owl/Bengal Tiger




### Objects

Level 1:

Egg, laid by birds (owls) 

Ice Block 

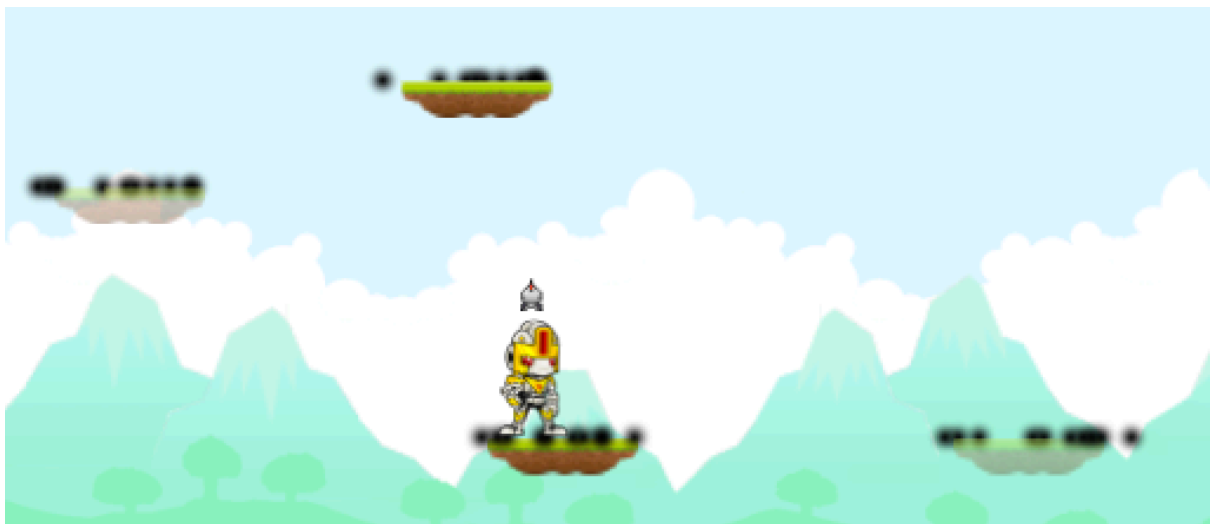
Level 2:

Banana thrown by monkey 

Tree  Crate 

**Particle effects:**

Show if a platform is time shift-able or not



## RESOURCES & LINKS

### Links to related resources

Design document based on this template:

[HTTP://FORUMS.XNA.COM/FORUMS/T/229.ASPX](http://forums.xna.com/forums/t/229.aspx)

[HTTP://INDIEPATH.COM/PUBLIC/DESIGNDOCUMENTTEMPLATE01.DOC](http://indiepath.com/public/designdocumenttemplate01.doc)

A few sections of the document are based on the design template in this book:

Fullerton, Tracy. Game Design Workshop, 2<sup>nd</sup> Edition: Elsevier Inc, 2008.

### Free art work (backgrounds, tiles, objects, hero):

<http://www.gameart2d.com/freebies.html>

### Free animal sprites:

<http://forums.rpgmakerweb.com/index.php?/topic/53552-whtdragons-animals-and-running-horses-now-with-more-dragons/>

### Audio:

<http://www.playonloop.com/>

### Game engine:

Unity2d

### Source Control:

Github

### IDE:

Monodevelop / Visual studios

### Image editor:

Paint.net

<http://www.getpaint.net/index.html>