Level Design

# Level Goal

The goal of every level is simple, get from one side of the map to the other with the help of 1 or 2 other players. This means there must be a challenge that requires at least 1 other player on the map to do so.

## Progression

First few levels should be simple jumping puzzles that will require the player to learn to step on buttons to allow their friend to continue. Last few levels may require them to jump on two different buttons at the same time [within 1 second].

Second set of levels will introduce moving platforms and switches that interact with them. Perhaps start introducing block objects that can be moved around by pushing.

Third set of levels will introduce moving air and fans that push players around, fans that can be turned on or off to do so.

# Mechanics: Triggers

## Levers/Buttons

Function: Levers exist in background, and when a player is standing over the lever, they can push a button to flip the state between ON and OFF. Doing so sends an Activate/Deactivate message respectively to the game object that the level is attached too.

Gameplay: Allows designed progression in a level. Mini goals within a level to get to specific locations. Can also be useful in “Puzzle Box” mechanics to create switch puzzles.

* States
  + On
    - Activates target game object.
  + Off
    - Deactivates target game object.

## Pressure Plates

Function: Pressure Plates exist with collision. When a player stands on the plate, it is considered “ON,” and as soon as a player steps off the plate it is considered “OFF.”

Gameplay: Provides ways for multiplayer cooperation, as a player could stand on a pressure plate to allow another player access to a different location.

* States
  + On
    - Activates target game object.
  + Off
    - Deactivates target game object.

## Trip Wires

Function: One time triggers. They start in an “OFF” State, and once a player runs through the wire, they flip to an “ON” state. There is no way to reset the tripwire once done.

Gameplay: Useful in skill challenges, say a player or players need to race/jump to a location and if they trip to many it closes off some rewards and prizes.

* States
  + On
    - Once tripped, permanently on.
  + Off
    - Starts in this state.

# Mechanics: Objects

## Moving Platform

Function: A collection to tiles that move according to a list of points. Player can stand on top of the platform, and player moves with the platform.

Gameplay: Allows platforms as simple as elevators to raise players from one level to the next, or as complex as pathed platforms.

* Modes
  + 1: Moves through lists of points from A to Z, and stops.
  + 2: Moves back and forth between points A to Z.
* States
  + On
    - Starts moving through list of points based on Mode.
  + Off
    - Stops at whatever the next point on the list is.

## Air Movement Block

Function: A tile that adds motion to objects that pass over it.

Gameplay: Allows one way halls, floating platforming puzzles, pushes objects around.

## Fan

Function: An object that pushes air either horizontally or vertically. This object can be turned on or off. This object can also push other objects around.

Gameplay: Allows for new ways to launch players, or provide falling/rising platform gameplay.

* States
  + On
    - Activates X number of Air Movement Blocks in front of the fan.
  + Off
    - Deactivates X number of Air Movement Blocks in front of the fan.

## Block

Function: Typical block that can be pushed around by the player, lifted by fans or movement air blocks, and can also hold down pressure plates.

Gameplay: Unique way to kill monsters, also a way to solve puzzles by placing blocks down on pads. Can even be used as a way to block monsters.

## Door

Function: Block player movement. Door’s can be opened and closed by triggers.

Gameplay: Help provide progression in a level by needing to open doors to move on to the next area.

* States
  + On
    - Moves door to open position
  + Off
    - Moves door to close position
  + KeyNeeded
    - Checks Player inventory on collision. If key, open door.

## Puzzle Box

Function: Connect switches to this box and it will send an “ON” message to another game object once the correct switches are flipped on. Requires at least 3 switches. In put should be “Switch 1” “On/Off” “Switch2” “On/Off” Switch 3 “On/Off.” This way a designer can set up Switch 1 to be On, 2 Off, 3 On… when that sequence is reached, Puzzle Box sends an “Activate” message to whatever game object it is attached to.

Gameplay: Allows creation of complex puzzles.

## Break Away Bricks

Function: Fall away when players walk over them.

Gameplay: Require players to think fast before they lose their footing.

* Modes
  + 1: Bricks fall away and never return
  + 2: Bricks fall away and return X seconds later.

## Monster Spawner