

# ASTRO FROG

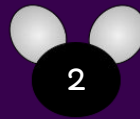
## Visual Design Guide

EDG-220-06 | Team 1 | Project 3 | Sprint 6 | Willow O'Hara



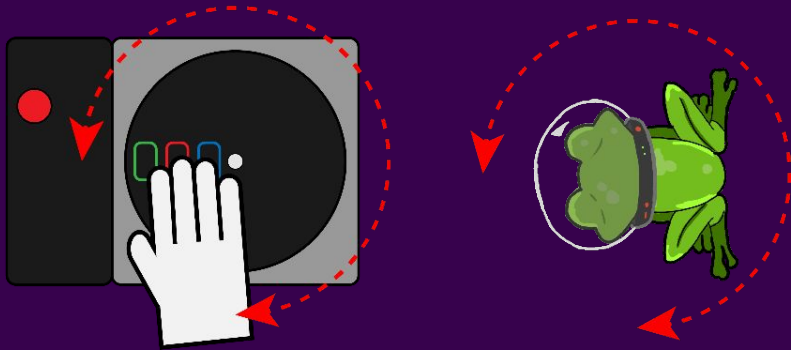
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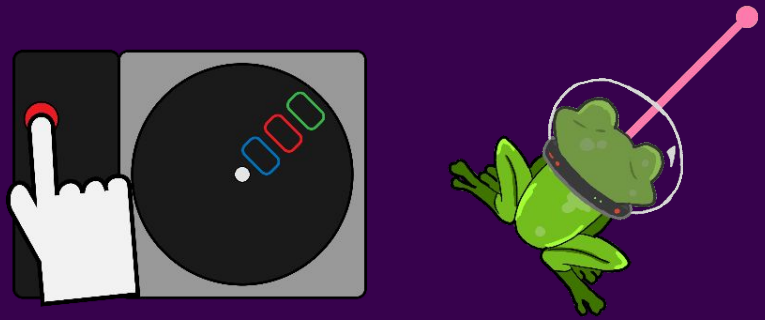


# Visual Design Summary

**Rotate** the turntable  
to rotate AstroFrog.



To shoot your **Tongue**,  
press the glowing button.



## Visual Design Summary (cont.)



Use your tongue to **Grapple** walls  
and **Collect** flies.

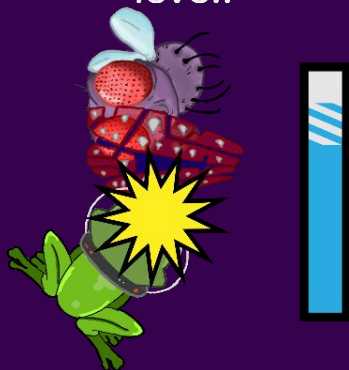


# Visual Design Summary (cont.)

Look out for **Attacks**  
from some enemy flies.



**Oxygen** is your timer  
and your health. If you  
run out, you lose the  
level.

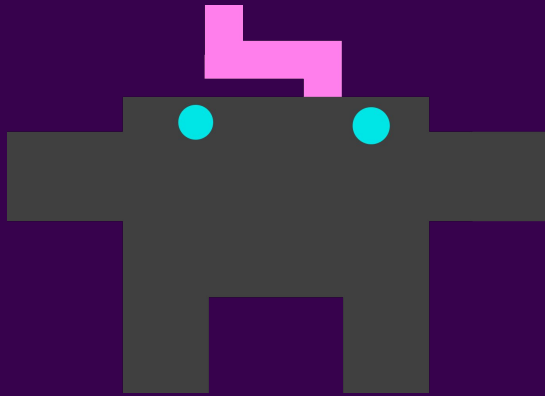


Catch the **Boss Fly**  
to win the level.

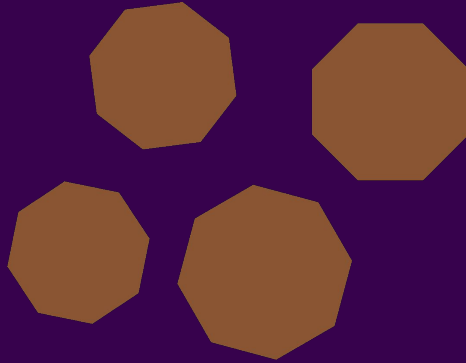


# Gameplay Progression

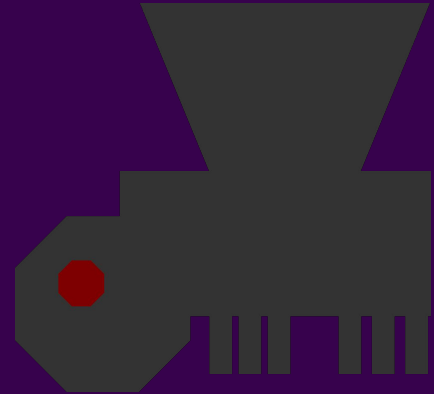
AstroFrog's gameplay takes place over the course of 3 levels, each with the same steps of progression.



**AstroFrog's Ship:** Catch the flies responsible for taking down AstroFrog's spaceship.



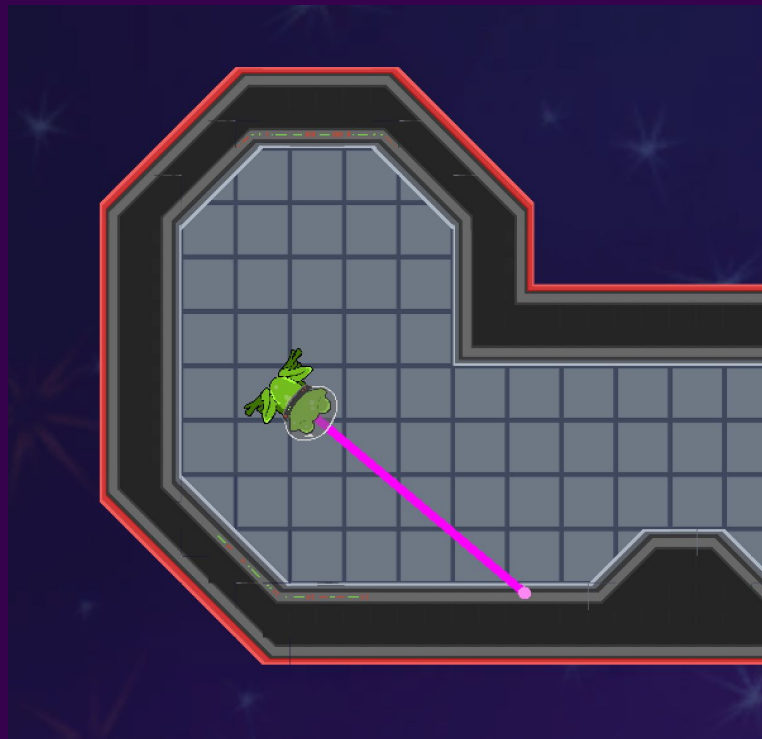
**Asteroid Field:** Navigate an asteroid field to find a way onto the Fly Guys' ship.



**Fly Guys' Ship:** Invade the Fly Guys' ship and take down their boss.

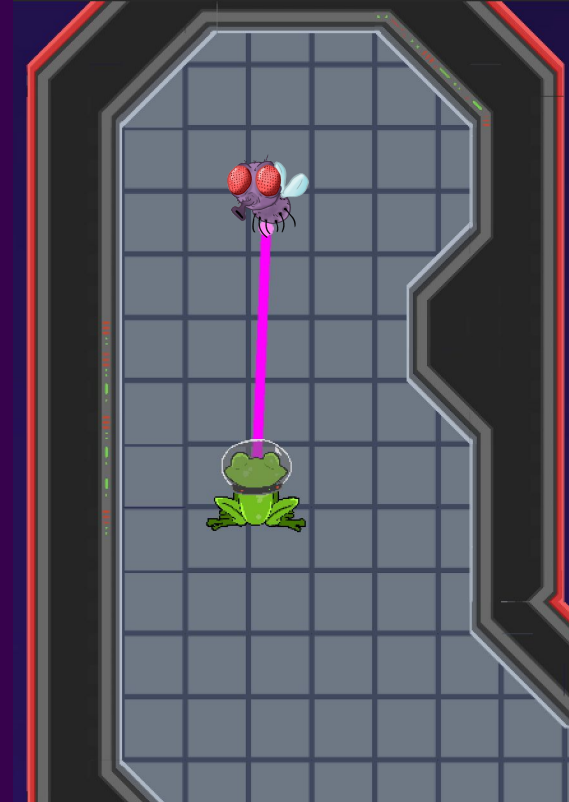
# Gameplay Progression - Movement

The player can hold the flashing action button on the DJ Hero turntable to make AstroFrog stick out their tongue. If the tongue hits a surface, AstroFrog will be pulled towards that surface for as long as the button remains held. Using this, the player can swing between walls to move forward in the level.



# Gameplay Progression - Flies

AstroFrog's tongue can also be used to collect flies. When AstroFrog's tongue touches a fly, it will automatically start retracting and pulling the fly back to AstroFrog. Whenever AstroFrog touches a fly, it will be eaten and added to the player's score.





# Gameplay Progression - Completing the Level

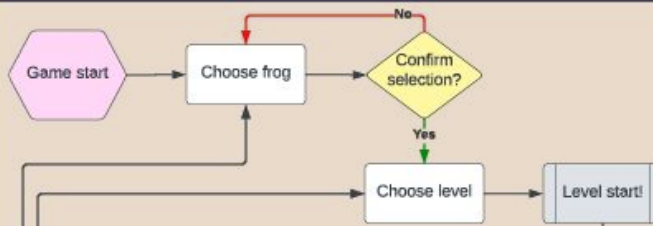
Each level has a giant boss fly at the end. When this fly is eaten, the level will end. The player's time and number of flies collected will be saved if they beat the previously-saved numbers, and they will be given the option to move on to the next level or go to the level select screen.



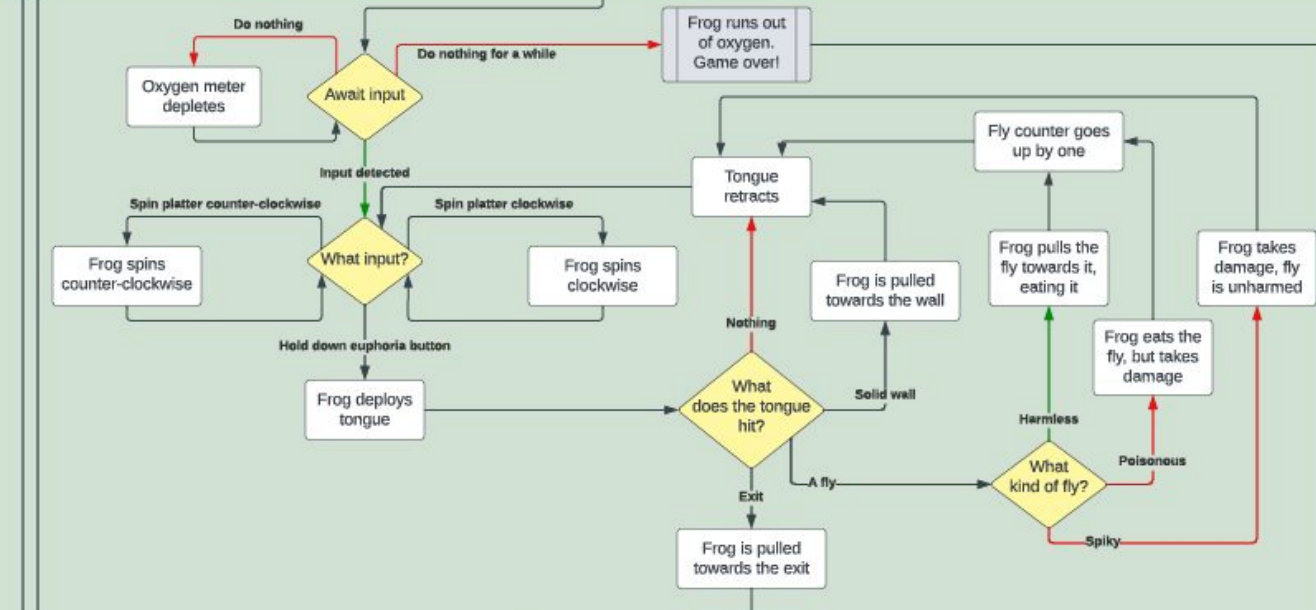
# ASTROFROG GAME LOOP DOCUMENT

by Natalie Froelich

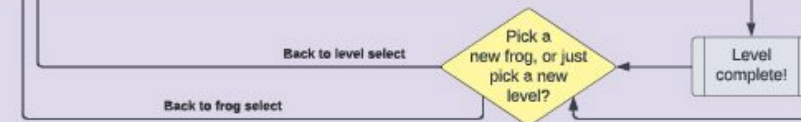
Menu



Gameplay



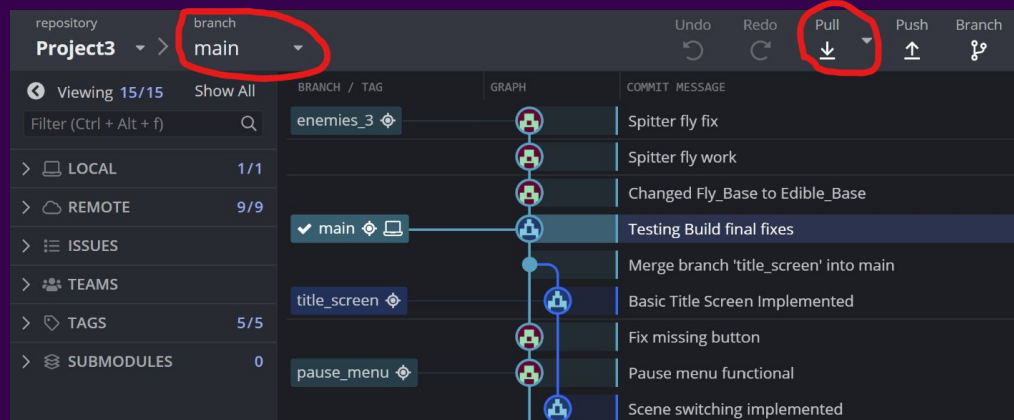
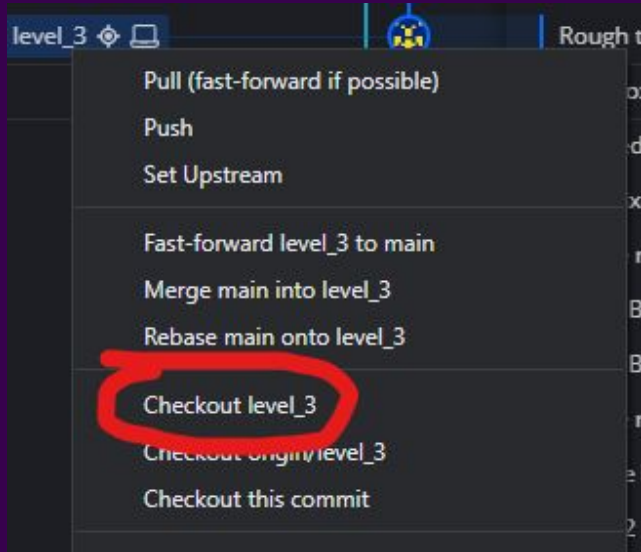
End of Level



# Pipeline - General

## Step 1:

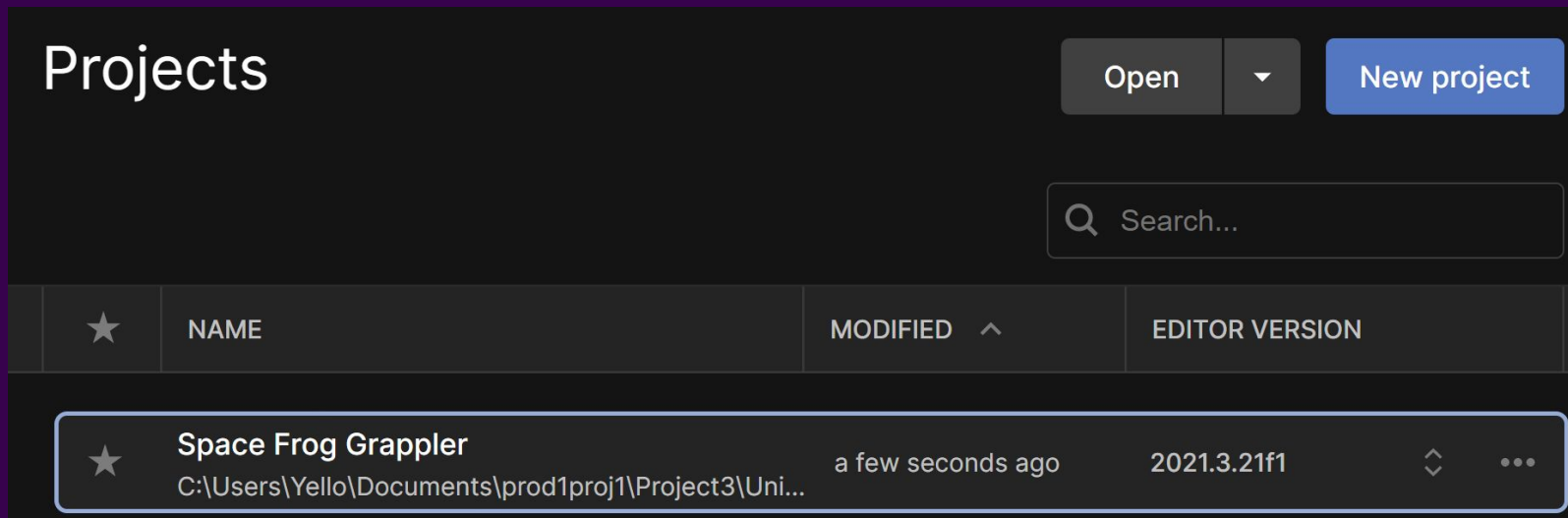
Check out or pull the desired branch from the repository. If working on a previously-started level, this branch will be named “level\_[level number]”. If creating a new level, pull from main.



# Pipeline - General

## Step 2:

Open the project in Unity version 2021.3.21f1.



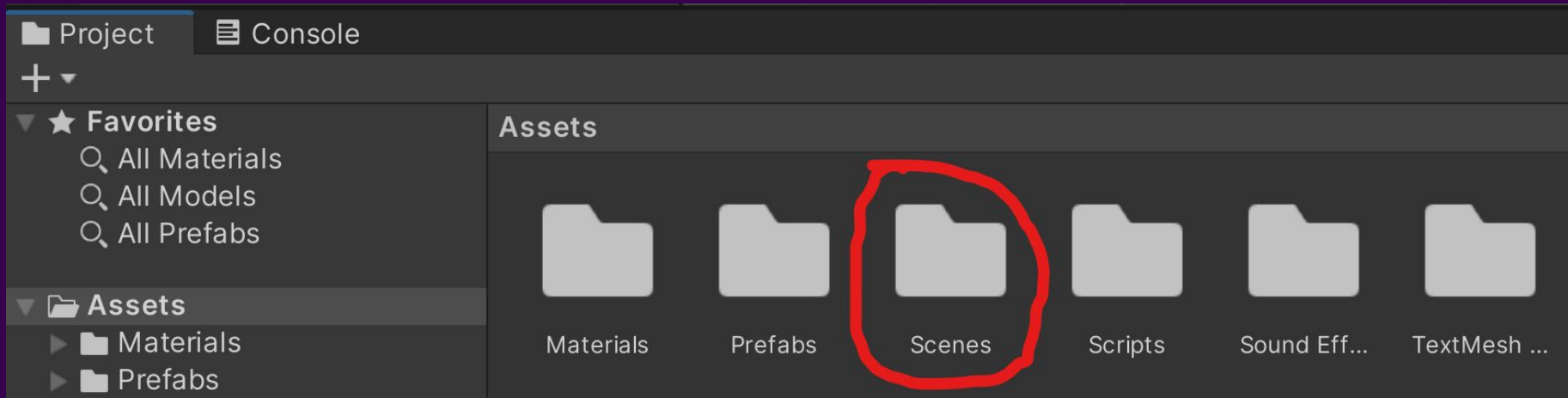
The screenshot shows the Unity Projects panel. At the top, there is a title 'Projects' and two buttons: 'Open' and 'New project'. Below these is a search bar with a magnifying glass icon and the text 'Search...'. The main area is a table with columns: a star icon, 'NAME', 'MODIFIED' (with an upward arrow), and 'EDITOR VERSION'. One project is listed: 'Space Frog Grappler' with a star icon, the path 'C:\Users\Yello\Documents\prod1proj1\Project3\Uni...', the modification time 'a few seconds ago', and the editor version '2021.3.21f1'. There are also expand/collapse and more options icons for this project.

	★	NAME	MODIFIED ^	EDITOR VERSION
★	Space Frog Grappler	C:\Users\Yello\Documents\prod1proj1\Project3\Uni...	a few seconds ago	2021.3.21f1

# Pipeline - General

## Step 3:

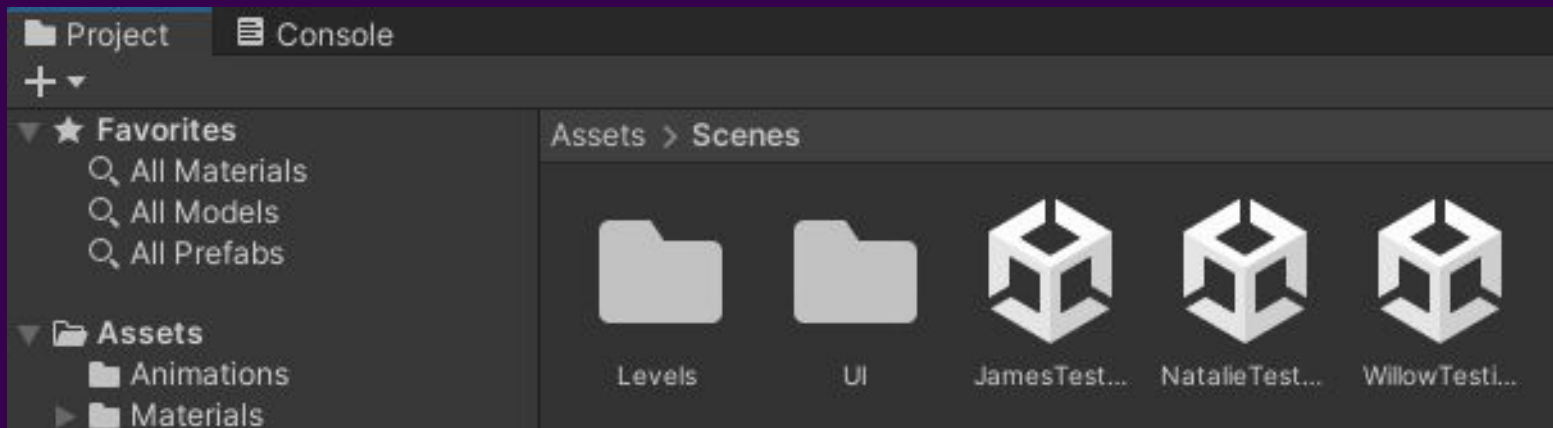
In the Project tab, navigate to Assets > Scenes.



# Pipeline - General

## Step 4:

If working in your personal sandbox scene, open/create a scene named “[Your Name]Testing”. If working in a level intended for the final product, open the Levels folder and open/create a scene named “level\_[Level number]”. If creating a new level, follow the steps in the “New Level” section of this guide.



# Pipeline - General

## When Done:

If you made a new level intended for release, create a branch in the git repository named “level\_[level number].” If some work was done on a level for release, make sure to commit and push to that branch (not main).

If a release level is design-complete and is awaiting implementation, notify a programmer and make sure to get their okay before merging the branch into main.

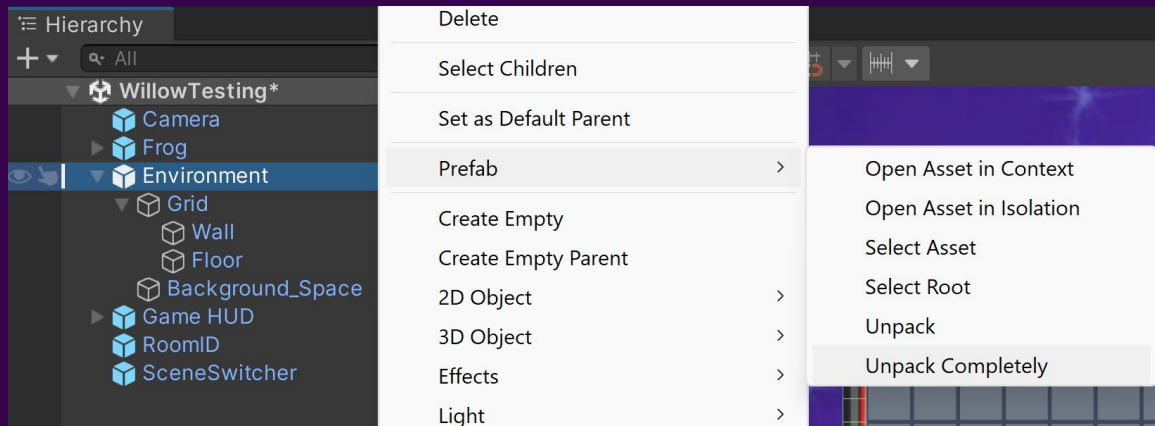
# Pipeline - New Level

## Step 1:

After creating a new scene, delete the default “Main Camera” object that gets created alongside it, then navigate to Assets > Prefabs and drag the following prefabs into the scene:

Camera; Frog (found in “Entities” subfolder); Environment (found in “Geometry” subfolder); Game HUD (found in “UI” subfolder); RoomID & SceneSwitcher (both found in “Managers” subfolder)

Finally, right click the Environment object in the hierarchy and select Prefab > Unpack Completely.

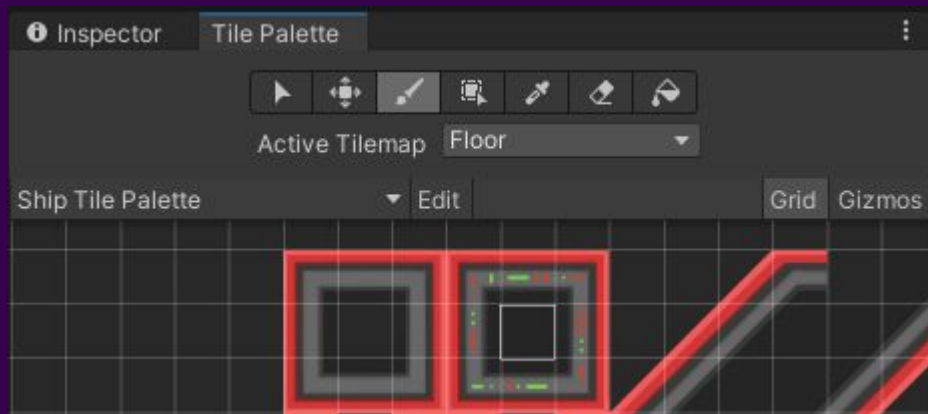




# Pipeline - Levels

## Step 2:

Open the Tile Palette window by going to the top tab and navigating to Window > 2D > Tile Palette. To switch between the ship and asteroid tile palettes, use the dropdown menu on the taskbar found below the “Active Tilemap” button.

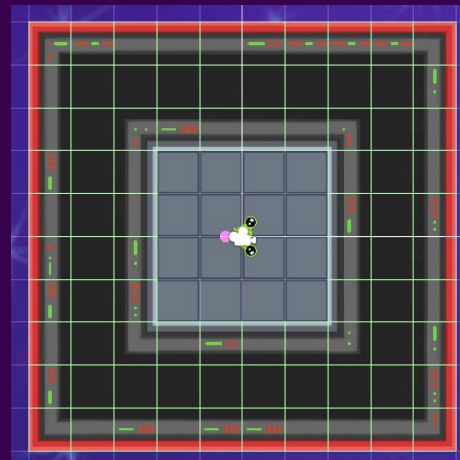


## Step 3:

In the tile palette window, click on a tile to select it, then draw your environment on in the scene editor.

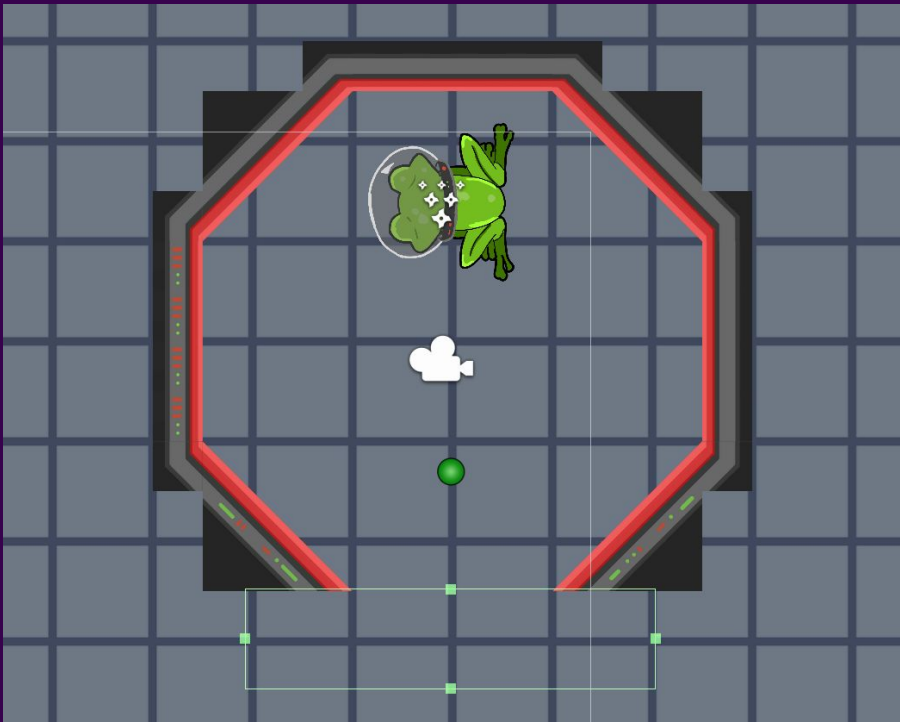
Pay attention to the active tilemap – the tilemap that your tiles will be drawn on – as the Floor tilemap has no collision. If you select Grid or Wall in the inspector, tiles in the wall tilemap will be highlighted in green.

If using the ship tile palette, use the light gray squares and triangles as the floor, the gray walls as the interior walls, and the red walls as the exterior walls, preferably with one tile of dark space between them (select inside the circle of red walls with lights to find the dark space tile).



# Pipeline - Checkpoints & Respawn Zones

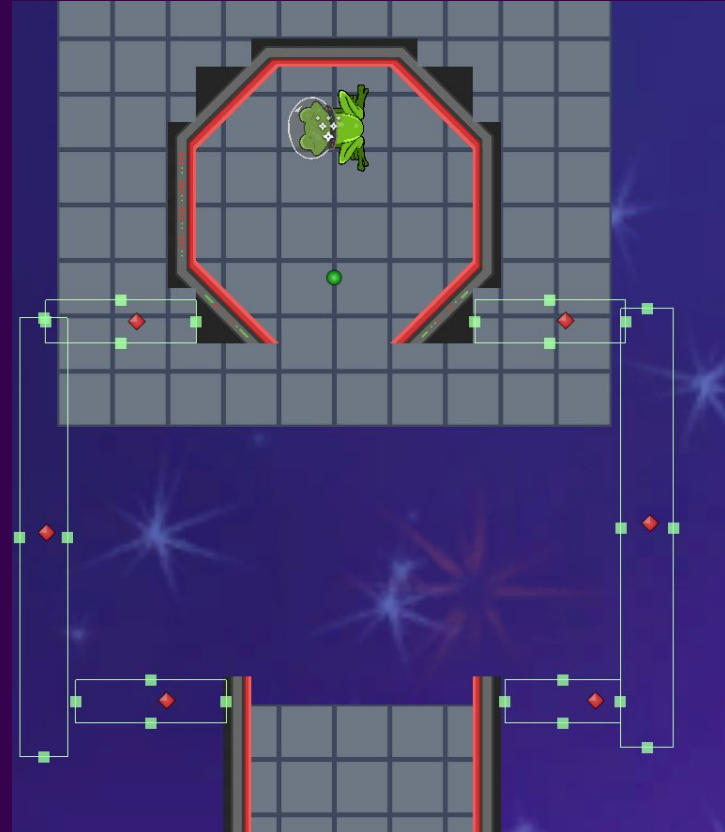
The checkpoint prefab can be found in Assets > Prefabs > Geometry. When AstroFrog crosses the checkpoint collider, the position marked by the green dot will be saved as the active checkpoint. When AstroFrog crosses the collider of a respawn zone (further explained in the next page), they will lose 50 seconds of oxygen and be teleported to the active checkpoint. While it is recommended to place a checkpoint before any area where the player could go out of bounds, a failsafe exists where AstroFrog's spawn position is saved as a checkpoint when first spawning into a level.



# Pipeline - Checkpoints & Respawn Zones

The respawn zone prefab can be found in the same folder as the checkpoint: Assets > Prefabs > Geometry. When AstroFrog touches the collider of a respawn zone, they will lose 50 seconds of oxygen and be sent to the active checkpoint. The actual position of the respawn zones (indicated by the red diamonds) is not important, however it is recommended to keep each diamond within its respawn zone for easier repositioning and as an accurate visual indicator of where one exists.

Tip: If multiple respawn zones are selected in the hierarchy, the selected zones will all be visible and each one can be individually edited with the Edit Collider tool.



# Pipeline - Pickups

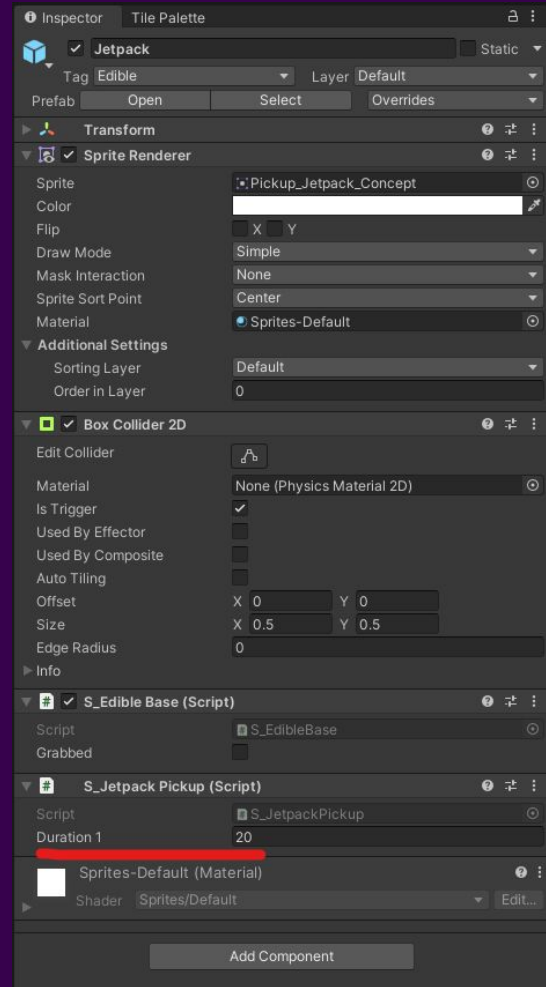
There are two pickups that can be used in levels. To place them in a level, drag the prefab you want to use (located in Assets > Prefabs > Entities) into the level. Both pickups have an editable value, which can be found in the object's unique script component at the bottom of the inspector tab.



**Oxygen Tank:** Refills AstroFrog's oxygen by a number of seconds defined in the "Oxygen Granted" field (Default of 60)

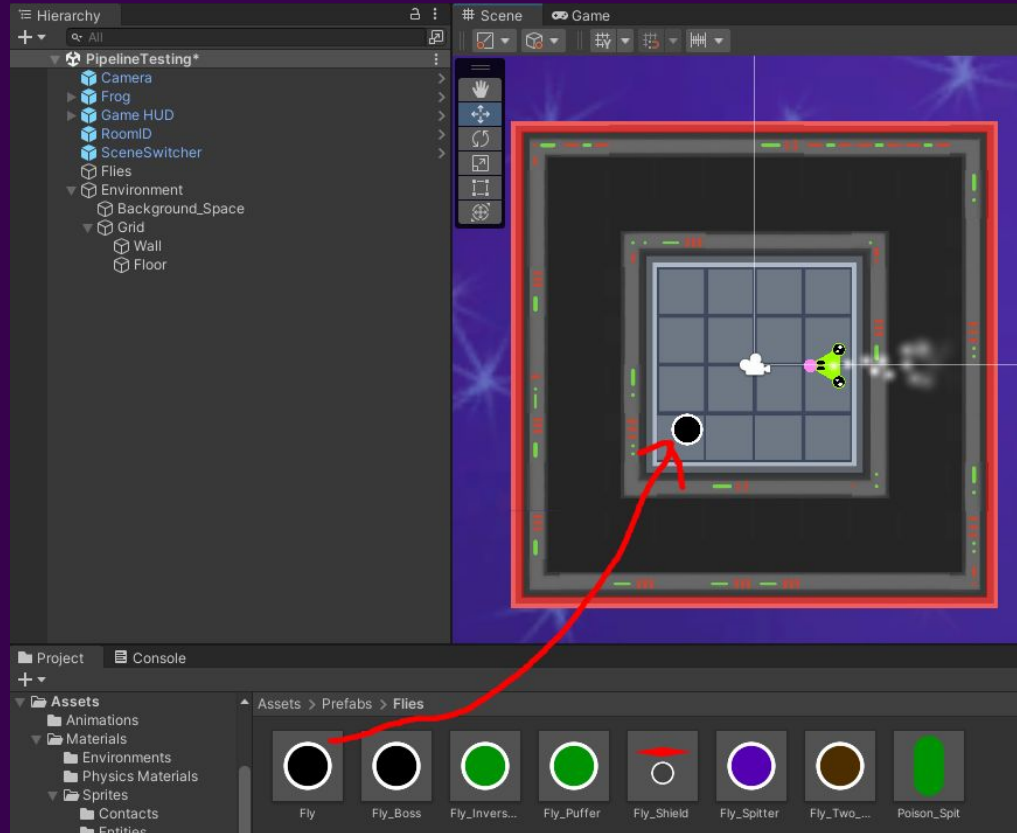


**Jetpack:** Causes AstroFrog to be automatically propelled forward for a number of seconds defined in the "Duration 1" field (Default of 20)



# Pipeline - Flies

There are 6 different varieties of flies, which can be found in Assets > Prefabs > Flies. To add a fly to the level, drag the prefab from the folder into the level. (For a cleaner hierarchy tab, it is highly recommended to create an empty object named “Flies” and drag each fly in the hierarchy into that object.) The following slides describe the functionality and editable values of each fly currently implemented.

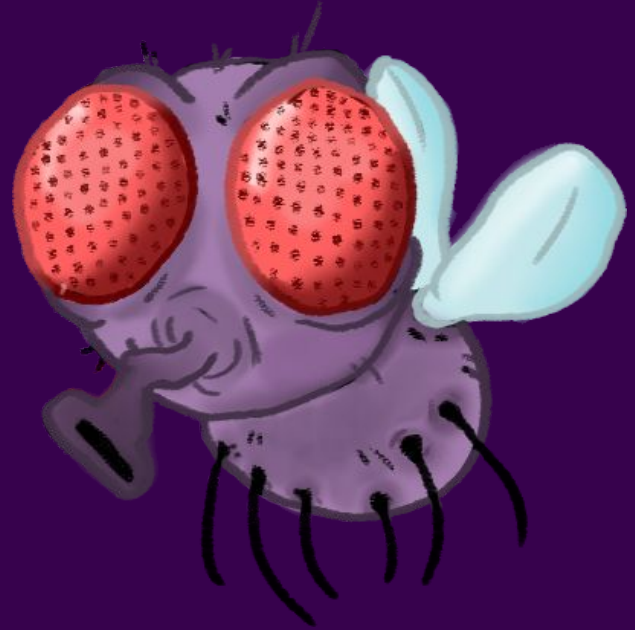


# Basic Fly

A harmless fly that stays in one place and does nothing.

**Editable Values:**

None



# Puffer Fly

Awaiting polish — do not use in demos

If AstroFrog is too close, it puffs up and turns green. While puffed, it will damage AstroFrog if they touch it.

## Editable Values:

None

## Inverse Puffer Fly

An alternate version of the Puffer Fly is currently in the prefabs folder, which puffs up when AstroFrog is too far rather than too close. We don't want to confuse the player by mixing the regular and inverted puffer flies, so this will likely be removed in a future revision. Do not use it in your levels.

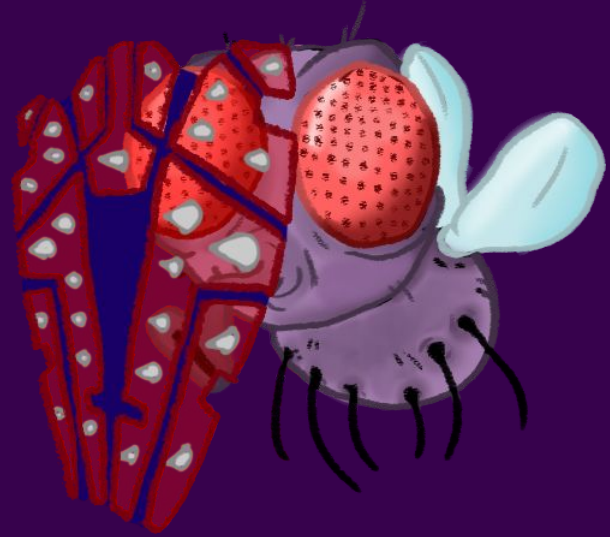


# Shield Fly

Carries a shield in front of it that damages AstroFrog if they touch it, forcing AstroFrog to eat it from a different angle.

## Editable Values:

None





# Spitter Fly

Awaiting polish — do not use in demos

Shoots harmful projectiles at a regular interval.

## Editable Values:

Spit Direction: The angle at which the projectiles will be spit towards.

Foreswing: The amount of time to wait before spitting.

Backswing: The amount of time to wait after spitting.

(Currently, foreswing and backswing basically work as just two addends to the time between spits, but backswing time is skipped for the first spit after spawning in.)



# Two Way Fly

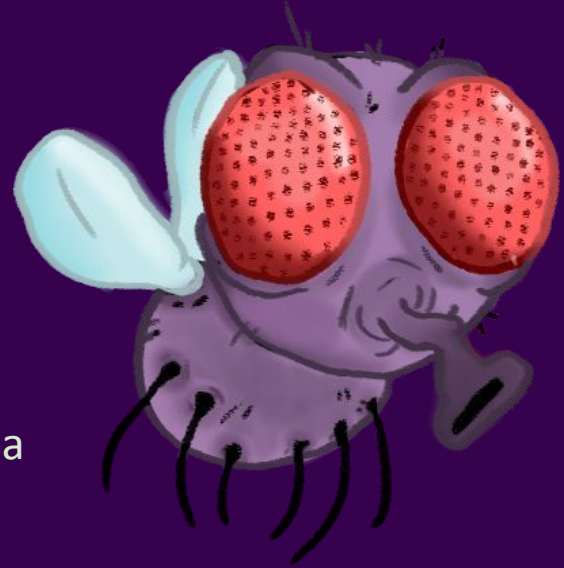
Awaiting polish — do not use in demos

Moves in one direction, then begins moving in the opposite direction after hitting a wall.

## Editable Values:

**Movement Speed:** The speed at which the the fly moves.

**Movement Angle:** The angle that the fly starts moving at (and the opposite of the angle that the fly will move at after hitting a wall).



# Boss Fly

The goal for each level. When this fly is collected, the level immediately ends and the player wins the level.

## Editable Values:

None

Don't use more than 1 boss fly in a level. The boss fly counts towards the total fly count in the level, so having more than 1 in a level would render it impossible to collect all flies there.

