

Visual Effects (Fire, Smoke) + Pickup

Tutorial

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For this exercise, you will learn how to create different visual effects such as fire, smoke, fog, etc. You will also learn how to implement a pickup function.



Open Your Existing Island Project Import External Assets

1. Download the Asset Pack from Blackboard
2. Remember where you saved the package
3. In Unity, from the top menu, select Assets - - > Import Package - - > Custom Package . . .
 - a. Locate the package you downloaded. Click the Import button.

Add Ambient Sound to your Island

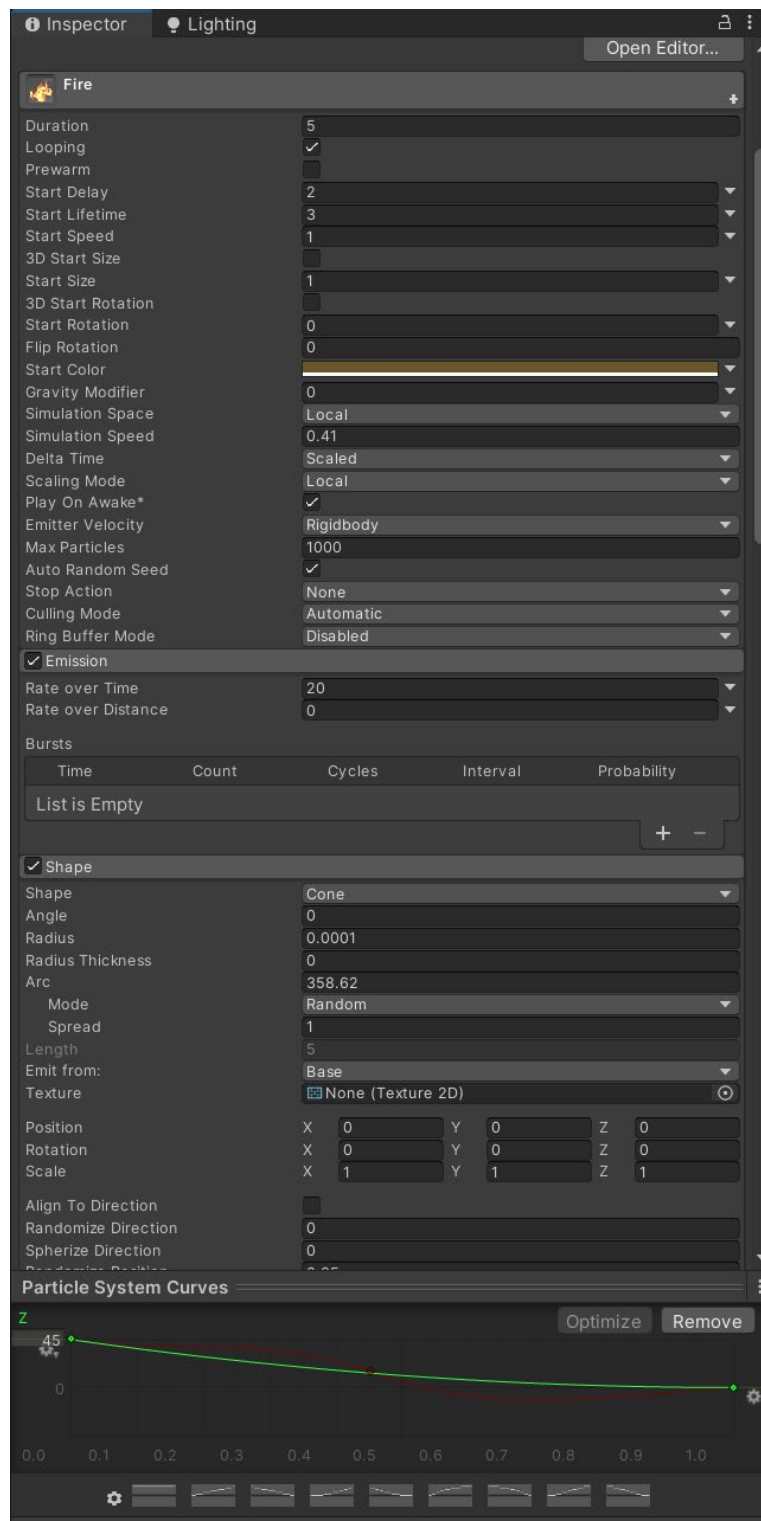
1. From the Project Window, in "Example Assets/Sounds", click on the asset called "hillside"
2. In the Inspector, uncheck "3D Sound", click "Apply"
3. From the Hierarchy Window, select the Terrain.
4. From Top Menu, select Component Audio Audio Source
5. From the Project Window, drag hill to the Inspector Window and drop it on the Audio Clip field currently called "None (Audio Clip)"
6. Check the Loop checkbox

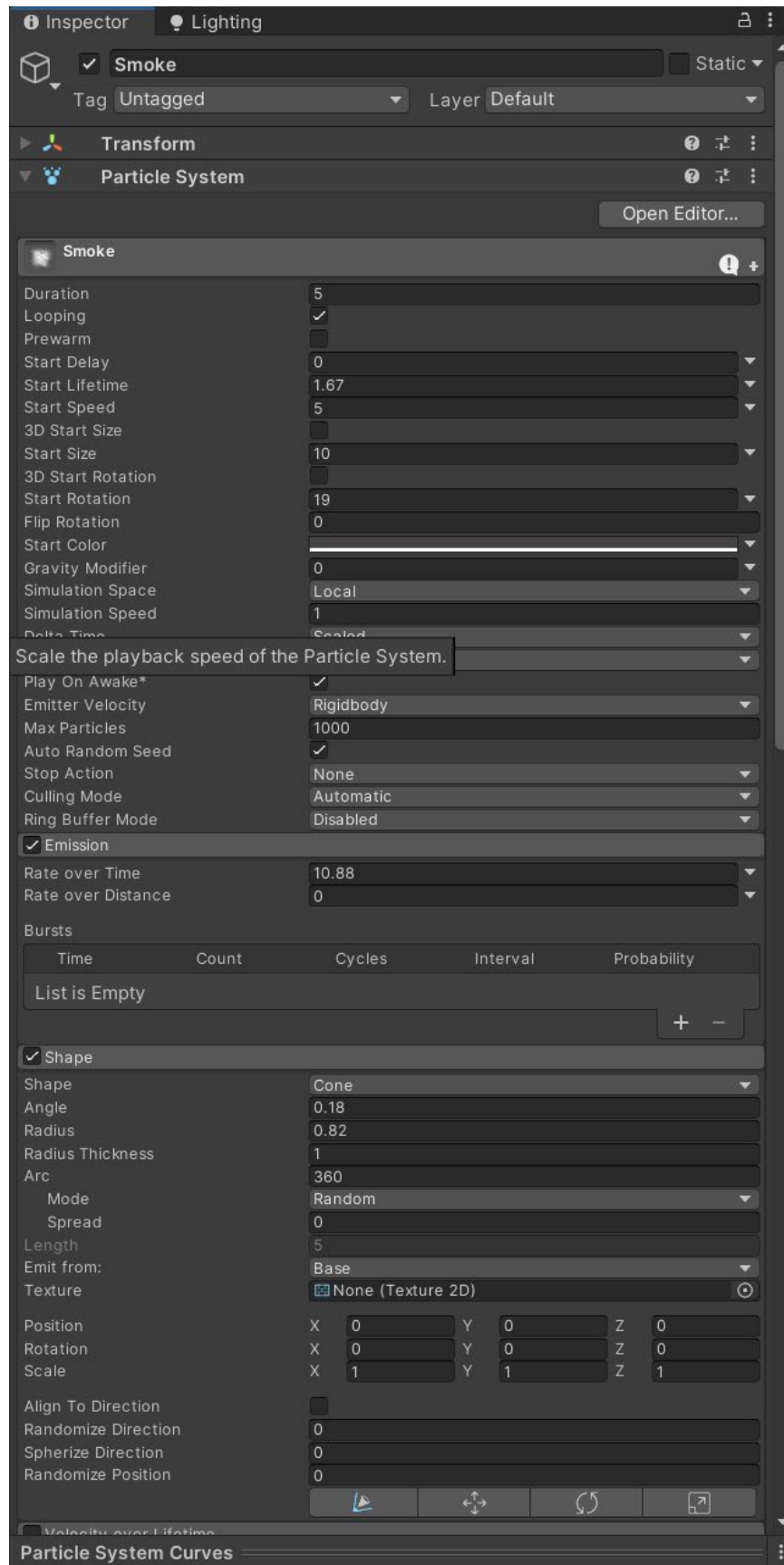
Import the Campfire Model

1. In the Project Window, in Example Assets/Models find the asset called “campfire”
2. Drag campfire onto the Scene window and place it on the ground
3. Add a Ellipsoid Collider
 - a. In the Hierarchy Window, select campfire
 - b. From the Top Menu, select Component - - > Physics - - > Capsule Collider
 - c. In the Inspector for the Capsule Collider, set Radius = 2, Height = 5, Center X = 0, Center Y = 1, Center Z = 0

Fire using new Particle System

1. Create empty object
2. Add particle system
 - a. Set the following





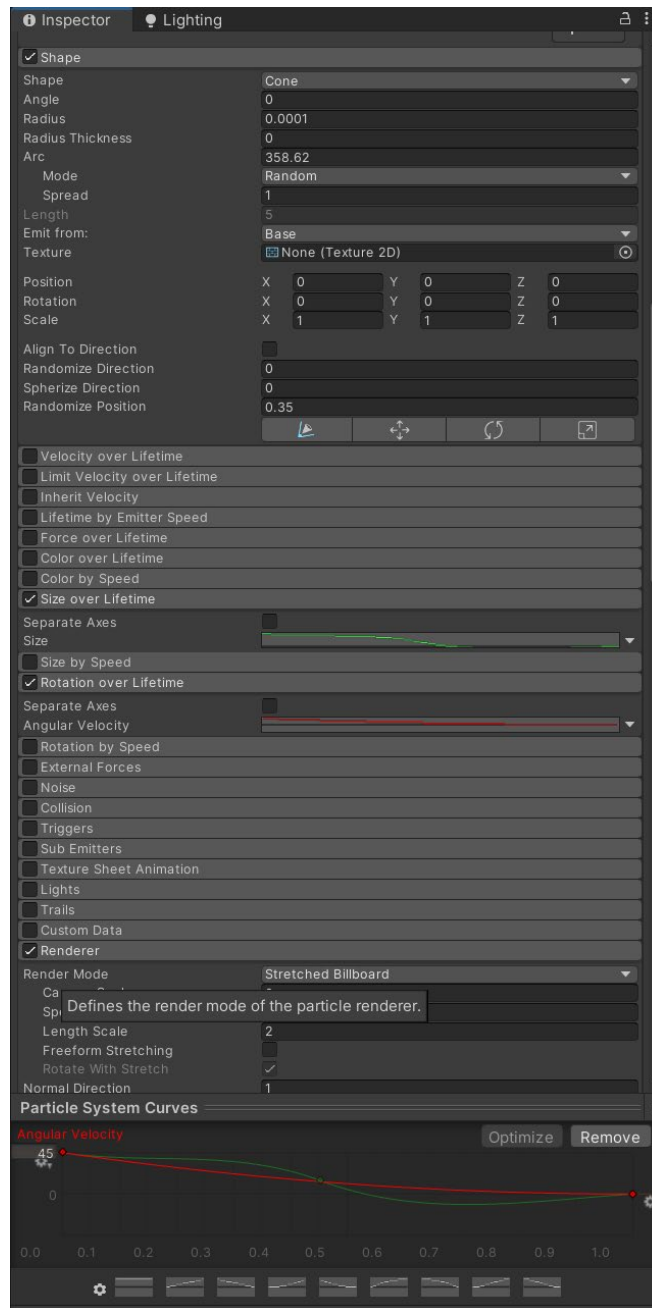
- b. Set emission to 20
- c. Shape to cone, Angle = 0, Radius = 0.3, Emit from the Base
- d. Size over Lifetime. Curve . The last one since the particle will start big get smaller
- e. Rotation over Lifetime. Curve. The middle one since also we want the particle to get smaller.
- f. Render: we need to add a material with flame texture and set the shader to particle additive / additive (soft). The render mode is stretched billboard.
- g. Additional Adjustment

Attach the FireSystem to the campfire.

- a. In the Hierarchy Window, drag the FireSystem object and drop it onto the campfire object.
- b. Select the FireSystem. In the Inspector Window, click on the Cog for the Transform and select "Reset"
- c. Set the Position Y = .8

Smoke using new Particle System

- 3. Create empty object
- 4. Add particle system
 - h. Set the following



- i. Set emission to 10.76
- j. Shape to cone, Angle = 0.04, Radius = 0.82, Emit from the Base
- k. Color over Lifetime. Use Gradient of white with full alpha
- l. Size over Lifetime. Curve . Small to big
- m. Size by speed: small to big
- n. Rotation over Lifetime: Random between two curve. Angular velocity 45, speed range 0 to 1.
- o. Rotation by speed: Angular velocity 45, speed range 0 to 1.
- p. Render: we need to add a material with flame texture and set the shader to particle additive / additive (soft). The render mode is billboard.

Sound

1. In the Hierarchy Window, select the campfire object
1. From the Top Menu, select Component - - > Audio - - > Audio Source
2. From the Project Window, in "Example Assets/Sounds", click on the asset called "fire_atmosphere" and drag it to the Inspector Window and drop it on the Audio Clip field currently called "None (Audio Clip)"
3. Check the Loop checkbox

Make a Campfire Prefab

1. Drag the campfire object from the Hierarchy Window to your Prefabs folder in the Project Window.
1. You can now place as many campfires around the island as you like!

Pickup and move objects

2. Create 2 cubes
3. Add Rigidbody to each cube
 - a. Remove gravity
4. Create empty game object "onhand" to the first character. The reason is we are going to use parenting.
5. Move onhad on Z direction 2 unit forward in the direction of the view
6. Create script and name it Pickup.

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class Pickup : MonoBehaviour
{
    public GameObject onhand;
    private Rigidbody rb;

    // Start is called before the first frame update
    void Start()
    {
        rb = GetComponent<Rigidbody>();
    }

    private void OnMouseDown()
    {
        rb.useGravity = false;
        rb.transform.position = onhand.transform.position;
        rb.transform.parent = GameObject.Find("PlayerCapsule").transform;
    }
}
```

```
private void OnMouseUpAsButton()
{
    rb.transform.parent = null;
    rb.useGravity = true;
}
```

7. Attach Pickup script to each cube
8. Assign the “onhand” object to the script in each cube
9. Run and Enjoy!