Procedural Mesh Exploder

Explode mesh into different pieces by using actual triangles at runtime.

Pros: Using actual triangles results an optimal performance.
Cons: Meshes can only be splitted to maximum amount of actual triangles.
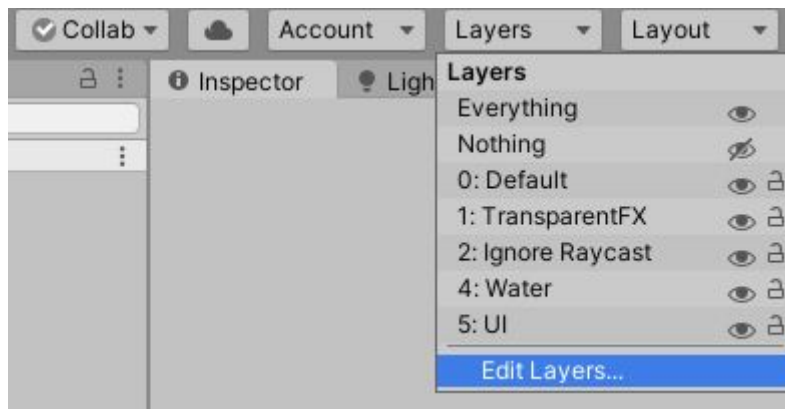
Notes: Textured clusters not supported.

Click Here to Check for any Additional Documentation

Content
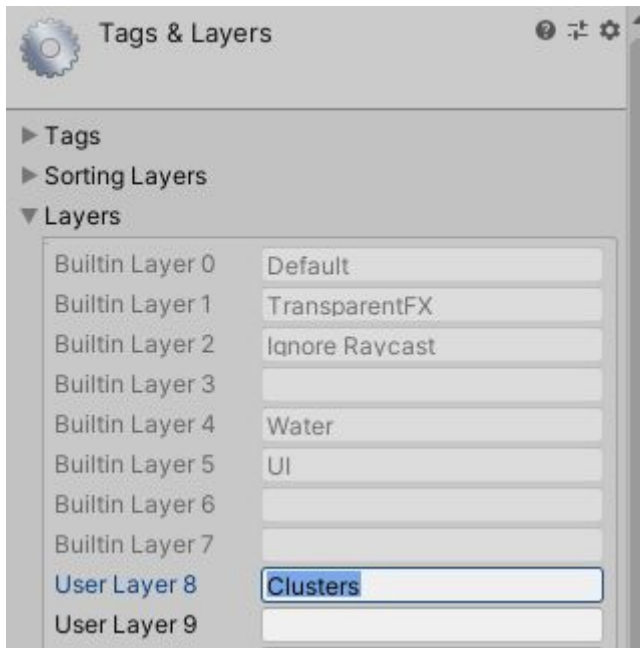
> **1 - Optimal Setup** (optional to optimize)
> **2 - Usage**
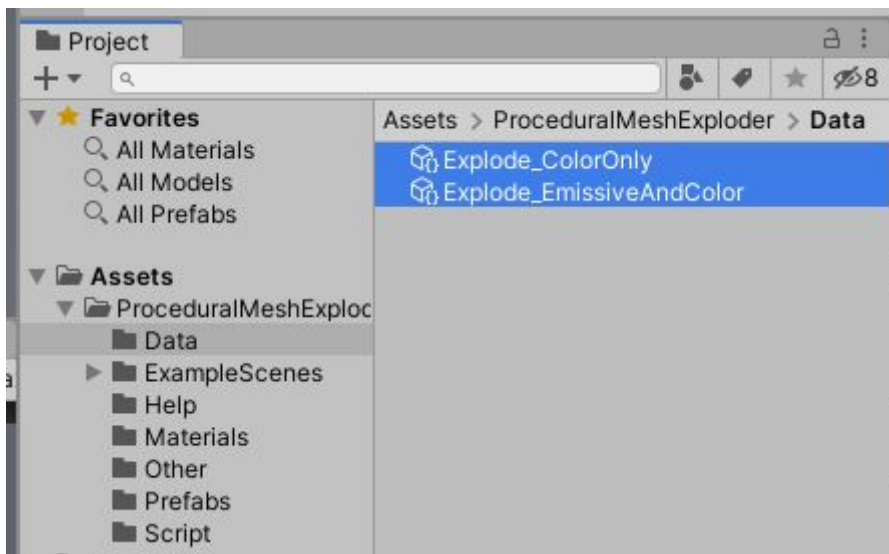> **3 - Creating Custom Configs**

1 - Optimal Setup

Open "Tags & Layers" window by clicking "Edit Layers…" button inside "Layers" dropdown menu.

Specify a new layer for "Clusters" (name it as you wish)

Select your MeshExploderConfig scriptables

Enter your Layer Index for Clusters layer

Go to "Project Settings > Physics" and disable "Cluster ⇔ Cluster" collision for optimal performance. (If you want to use Cluster ⇔ Cluster collision, you don't need to specify a new layer for clusters, but it's better you toggle on UseMeshColliders boolean from your MeshExploderConfig scriptables, instead, clusters will suffer from inter-collisions which results an unwanted explosion)
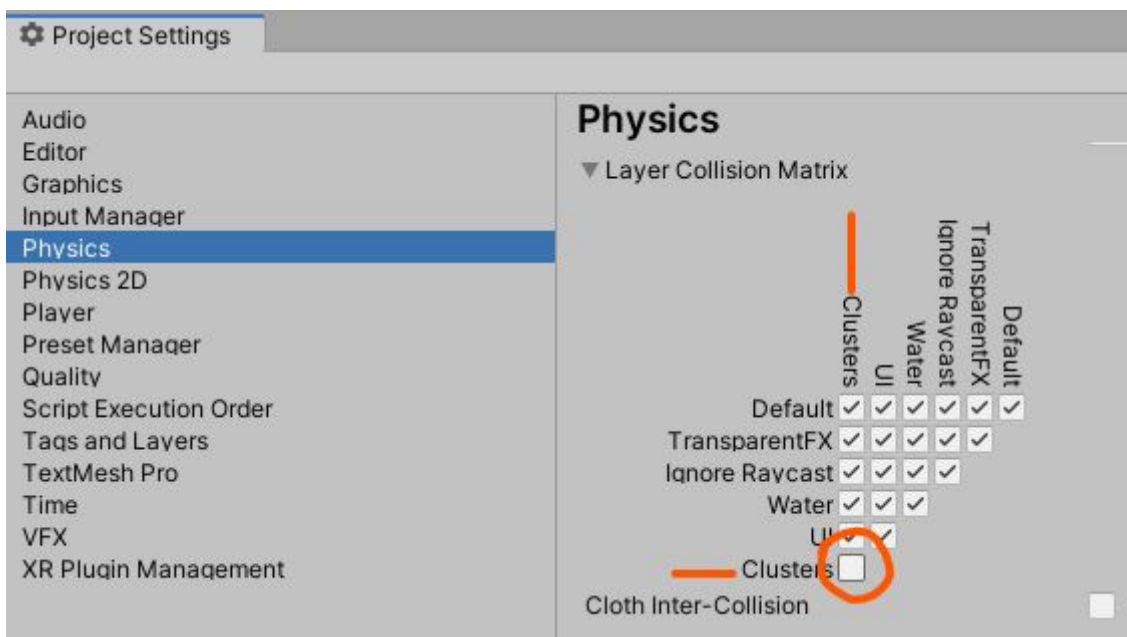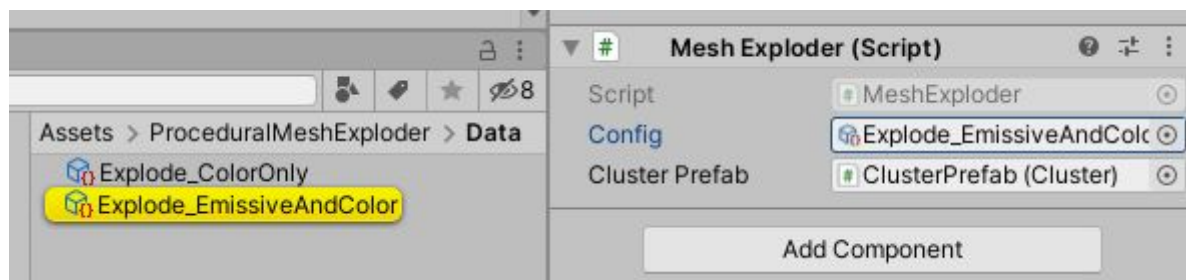

2 - Usage

Look for "MeshExploder" prefab inside "Prefabs" folder.
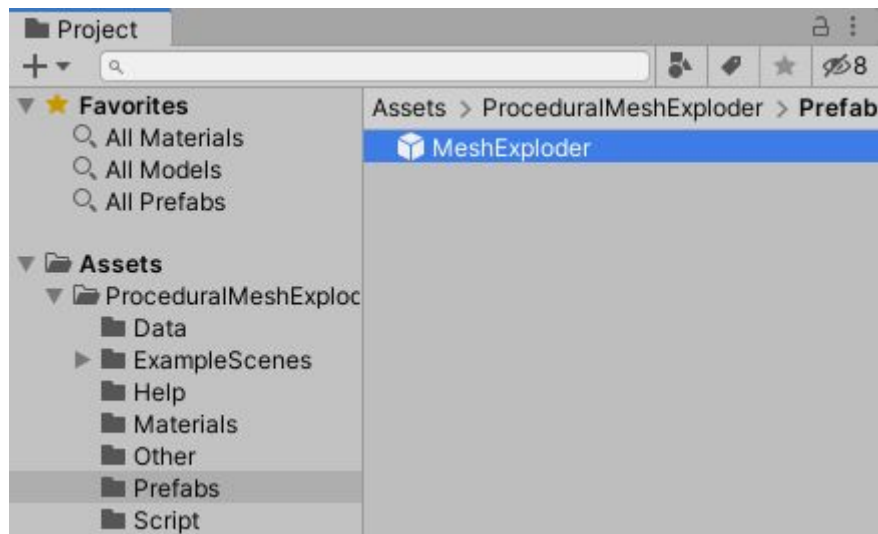
[Informative Step] You can duplicate "MeshExploder" prefab to use different MeshExploderConfig scriptables for each config. Default prefab uses "Explode_EmissiveAndColor" config.


Drag and drop "MeshExploder" prefab to the object you wish to explode on Hierarchy window which must have a "MeshRenderer" component. (MeshExploder explodes parent object)
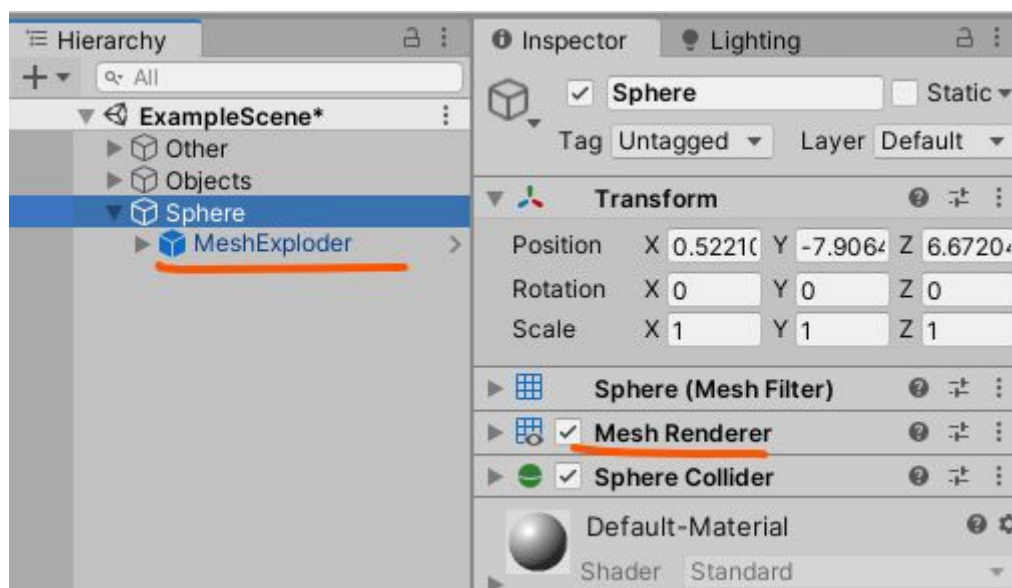
If you use an Imported Mesh, be sure that "Read/Write Enabled" is checked as "True".
Instead, script cannot access mesh data and you will get an error message.
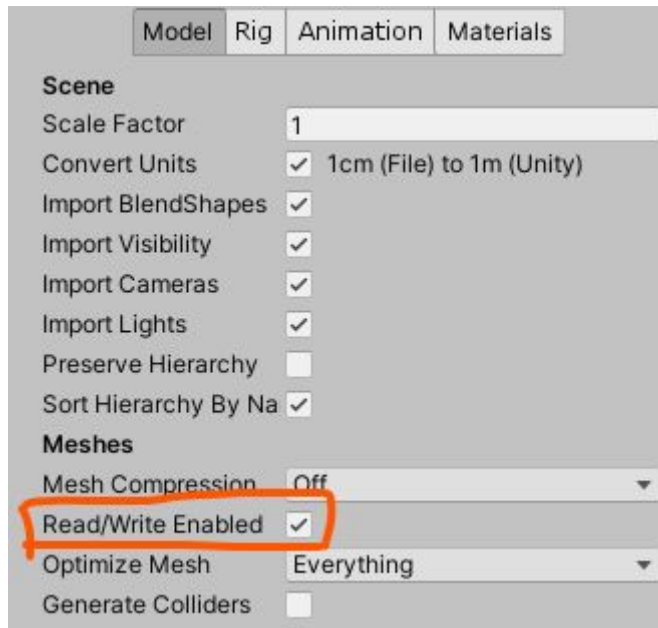
Click **Apply** after you change "Read/Write Enabled".
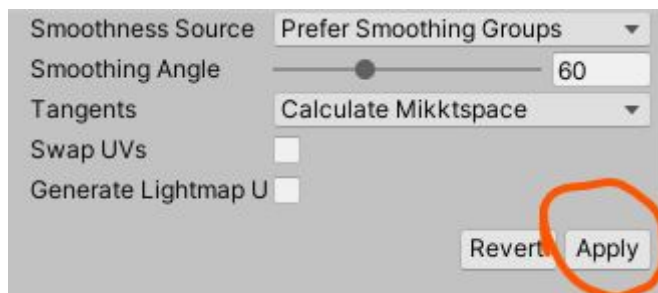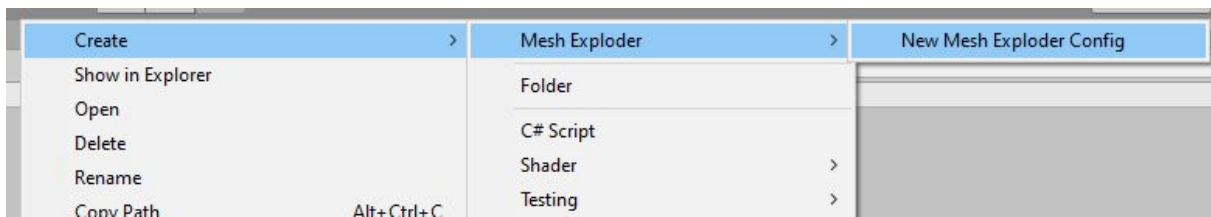

Now you can call "meshExploder.**Explode()**" method from your scripts.

```
GetComponentInChildren<ProceduralMeshExploder.MeshExploder>().Explode();
Destroy(gameObject);
```
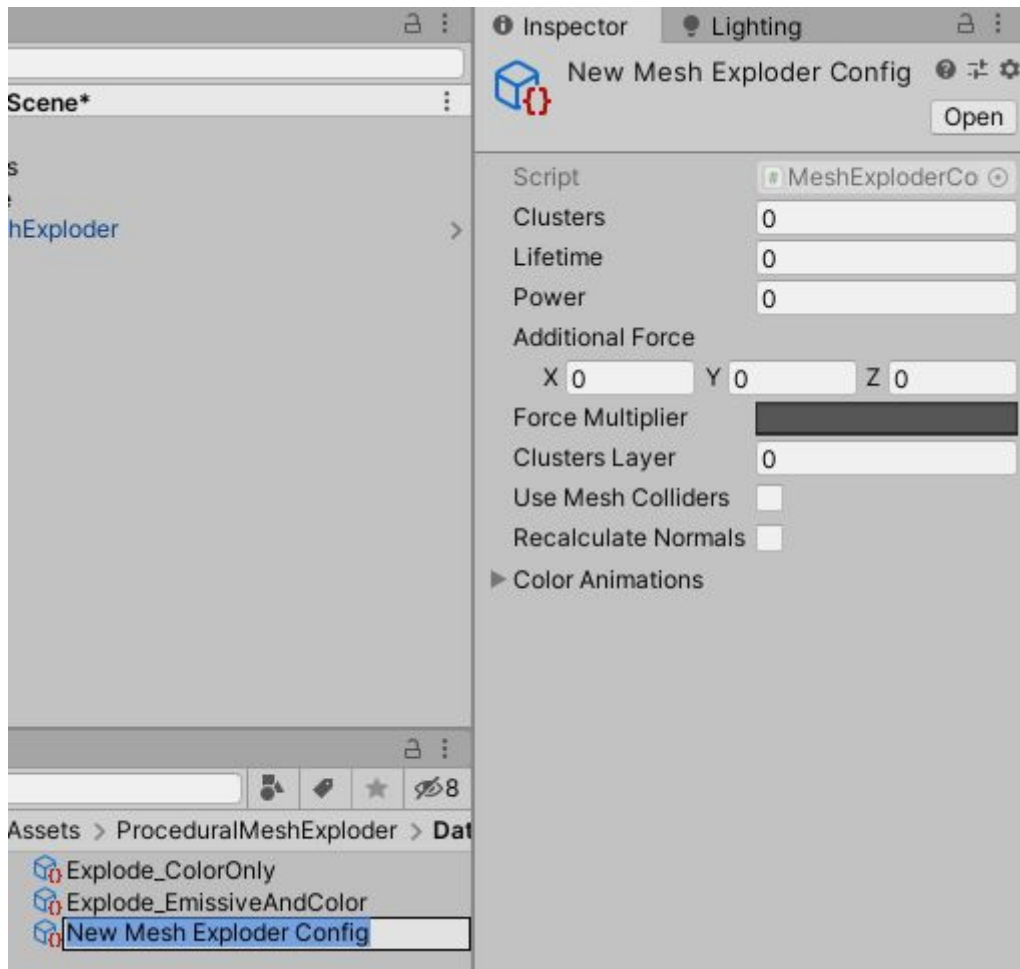
You must **Destroy original GameObject** at the same time as shown here.

3 - Creating Custom Configs

Right click on "Project" window and click "Create > Mesh Exploder > New Mesh Exploder Config"

You will have a new Mesh Exploder Config scriptable.

Clusters: Amount of clusters

Lifetime: Lifetime of clusters in seconds

**Power:** Explosion power of clusters

AdditionalForce: Constant additional force applied to the clusters

ForceMultiplier: Additional force multiplier over lifetime (Applied to AdditionalForce)

UseMeshColliders: Always use mesh colliders for clusters (Default is Box Colliders)

**ColorAnimations:** Color animations over life

Color animations runs on Material Properties, as default, you can animate **any property of type Color** on material by providing property name
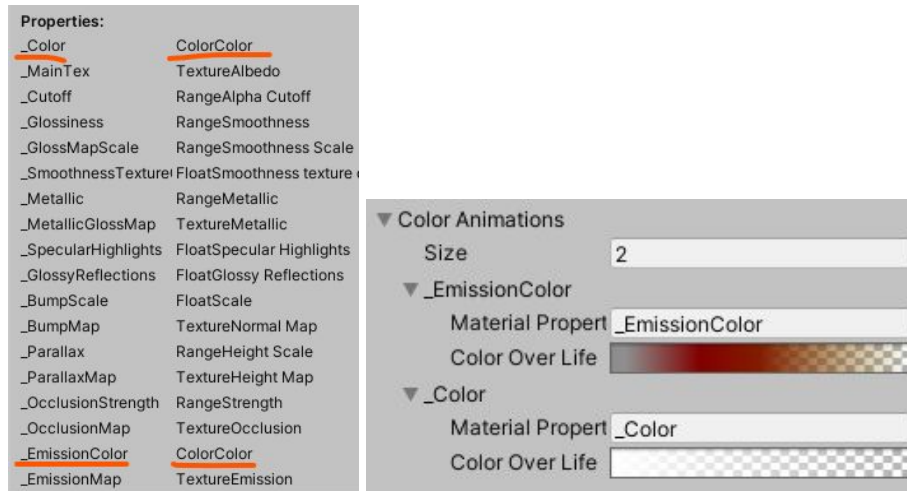
Animating other types of material properties could be included in further updates by your requests

Clusters has ClusterMaterial which uses Standart shader by default.
If you wish to change the shader, look for "ClusterMaterial" inside "Materials" folder.
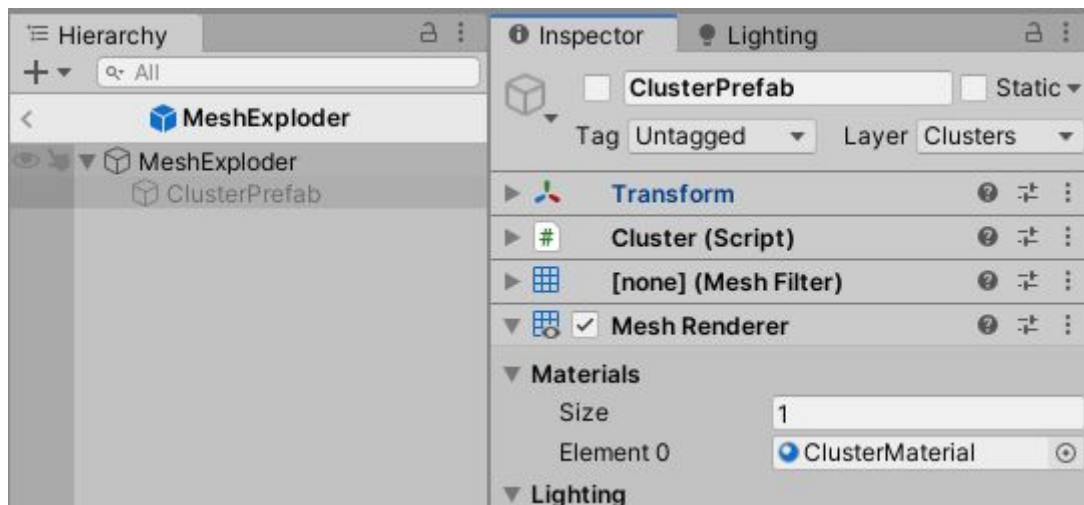
You can contact me for any techinal support via "neutrinora@gmail.com", please mention "ProceduralMeshExploder" in your e-mail title.