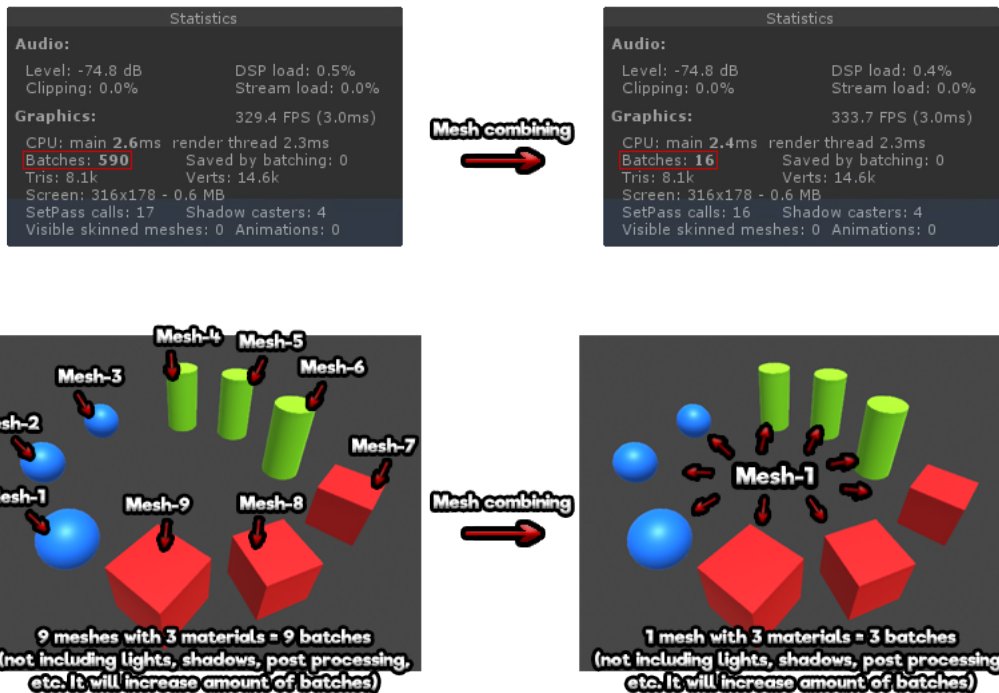


# Mesh Combiner

Mesh Combiner is a little script which can combine different meshes into one mesh for reduce the amount of batches / draw calls, making your game more optimized.



Tutorial video:

<https://youtu.be/PxkthEMiEQI>

The video content:

## Mesh Combiner

1. What is a Mesh Combiner? (00:05)
2. Mesh combining with the same material. (00:15)
3. Mesh combining with the same material & colliders. (01:23)
4. Mesh combining with different materials. (02:16)
5. Saving created mesh. (03:08)
6. How to prevent some meshes from combining? (03:30)
7. Mesh combining via code. (04:04)
8. Optimization example. (05:02)

## Mesh combining via code example from the video:

```
public class CombineMeshesOnStart : MonoBehaviour
{
    private void Start()
    {
        MeshCombiner meshCombiner = gameObject.AddComponent<MeshCombiner>();
        meshCombiner.CreateMultiMaterialMesh = true;
        meshCombiner.DestroyCombinedChildren = true;
        meshCombiner.CombineMeshes(false);
    }
}
```

← Add the MeshCombiner component to the gameObject.

← Set MeshCombiner settings.

← Combine children's meshes of this gameObject into one mesh.

## Optimization example from the video:

The image shows four screenshots of the Unity Inspector and Hierarchy panels, illustrating the effect of shadows on triangle counts after mesh combining.

**Top Left (Shadows ON):** The Hierarchy panel shows a Cube (Mesh Filter) with a Mesh component. The Inspector panel shows the Mesh component with 1151 Batches and 14.9k Tris. The Graphics panel shows 329.4 FPS (3.0ms).

**Top Right (Shadows ON):** The Hierarchy panel shows a Cube (Mesh Filter) with a Mesh component. The Inspector panel shows the Mesh component with 19 Batches and 10.5k Tris. The Graphics panel shows 333.7 FPS (3.0ms).

**Bottom Left (Shadows OFF):** The Hierarchy panel shows a Cube (Mesh Filter) with a Mesh component. The Inspector panel shows the Mesh component with 590 Batches and 8.1k Tris. The Graphics panel shows 329.4 FPS (3.0ms).

**Bottom Right (Shadows OFF):** The Hierarchy panel shows a Cube (Mesh Filter) with a Mesh component. The Inspector panel shows the Mesh component with 16 Batches and 8.1k Tris. The Graphics panel shows 333.7 FPS (3.0ms).

After mesh combining, a small side effect is the increased number of triangles.

Shadows OFF Without shadows, the number of triangles is the same.