

// ProceduralTerrain

A falloff map is basically inverted height map

It specifies how much height to remove instead of
how much to add

```
frequency *= Lacunarity;
}

if (UseFalloffMap) {
    float falloff_00 = Mathf.PerlinNoise(x, z) - 0.5f;
    float falloff_01 = Mathf.PerlinNoise(x, z + 1f) - 0.5f;
    float falloff_10 = Mathf.PerlinNoise(x + 1f, z) - 0.5f;
    float falloff_11 = Mathf.PerlinNoise(x + 1f, z + 1f) - 0.5f;

    height00 -= Mathf.Clamp01(height00 - falloff_00) * 0.5f;
    height01 -= Mathf.Clamp01(height01 - falloff_01) * 0.5f;
    height10 -= Mathf.Clamp01(height10 - falloff_10) * 0.5f;
    height11 -= Mathf.Clamp01(height11 - falloff_11) * 0.5f;
}

int x0 = x * CellSize;
```

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We generate the values for the four vertices the same way we do for a height map

```
frequency *= Lacunarity;
}

if (UseFalloffMap) {
    float falloff_00 = Mathf.PerlinNoise(x, z) - 0.5f;
    float falloff_01 = Mathf.PerlinNoise(x, z + 1f) - 0.5f;
    float falloff_10 = Mathf.PerlinNoise(x + 1f, z) - 0.5f;
    float falloff_11 = Mathf.PerlinNoise(x + 1f, z + 1f) - 0.5f;

    height00 -= Mathf.Clamp01(height00 - falloff_00) * 0.5f;
    height01 -= Mathf.Clamp01(height01 - falloff_01) * 0.5f;
    height10 -= Mathf.Clamp01(height10 - falloff_10) * 0.5f;
    height11 -= Mathf.Clamp01(height11 - falloff_11) * 0.5f;
}

int x0 = x * CellSize;
```