Height Shader
Version I.I

Documentation

Step by Step using tutorial

& Scripting Reference

Thank you for buying this asset I hope it will be useful for your development!

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Summary of Changes

1. Now the Height Shader Component differentiates between terrain or Mesh associated Game Objects
2. The Slope Fader is fixed. You will see harder transitions if the slope fader is low and softer transitions if is height.
3. Now is possible to use optionally Local or Global references for the transitions
4. Added a button to make the current look of a global referenced Height Shader object to Local
5. Now the Height shader can be added like a Component, under the submenu: *WahnStudio/HeightShader*
6. The Shader Name now is ***WahnStudio/HeightShader*** (previously WahnStudio/HeightShader). BE AWARE OF THIS IF YOU WANT TO USE PREVIOUS HEIGHT SHADER MATERIALS FROM VERSION 1.0
7. Minor fixes. (Like better organization of the namespace)

Thanks to all the people who bought the previous version. Especially Christian Chipont and B Beumeler, who gave me important feedback for this new Version. I hope you find it better than the previous one.

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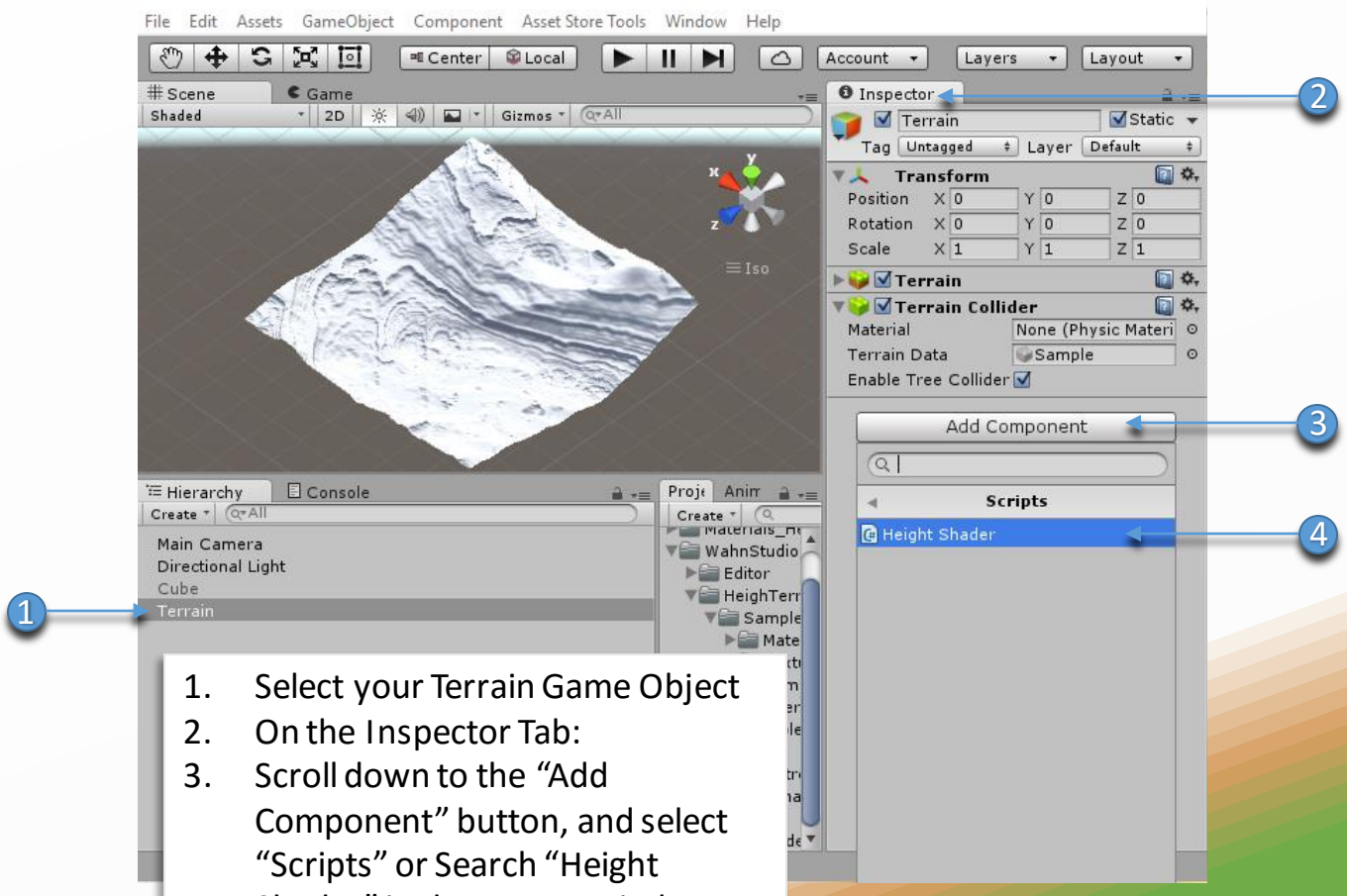
Setting Up

You can apply this asset to any terrain you have created. Do so by adding the “Height Shader” Script to any Terrain Game Object.



1. Select your Terrain Game Object
2. On the Inspector Tab:
3. Scroll down to the “Add Component” button, and select “Scripts” or Search “Height Shader” in the Popup Window
4. Select Height Shader

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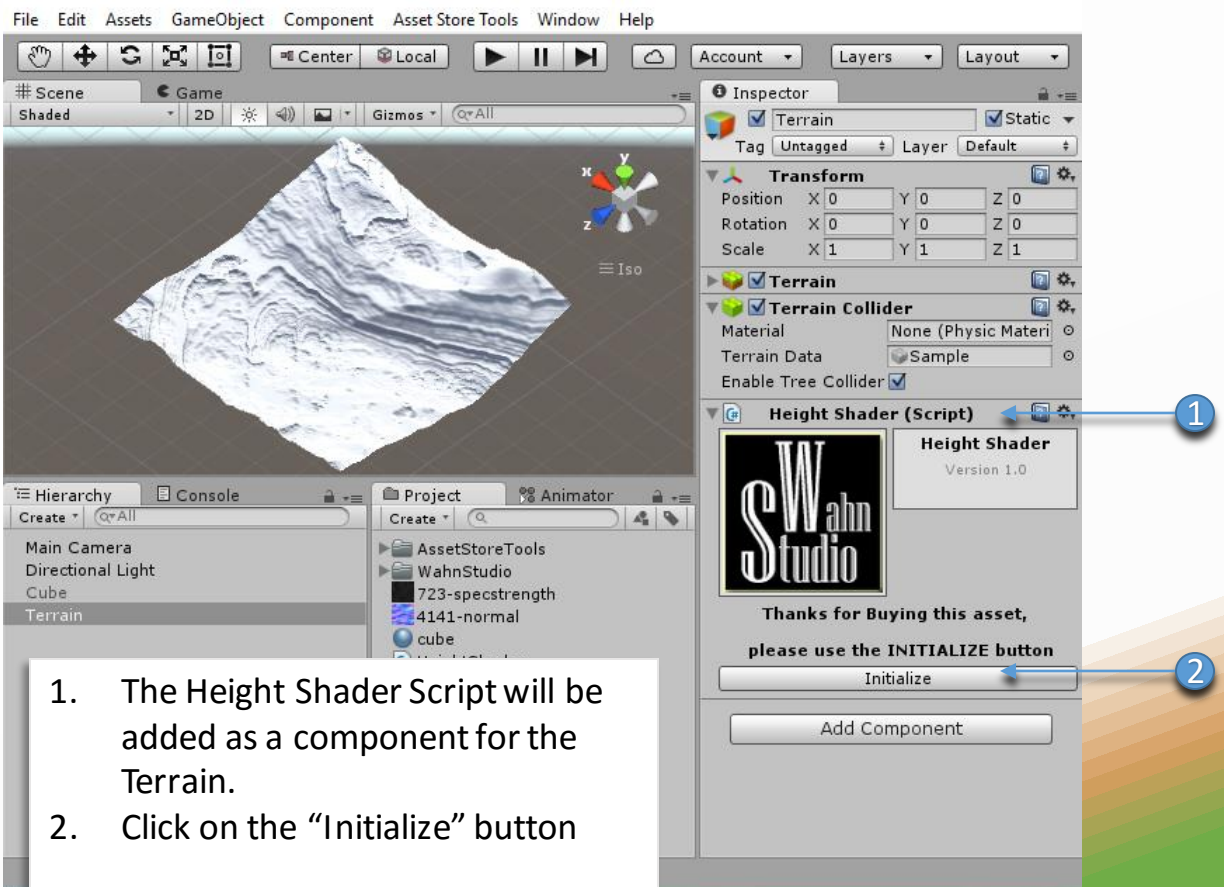
Initialize

Click on the Initialize Button in the Height Shader section associated to the Inspector view of your terrain Game Object



1. The Height Shader Script will be added as a component for the Terrain.
2. Click on the “Initialize” button

3. A Context menu will let you choose previous Height Shader Materials

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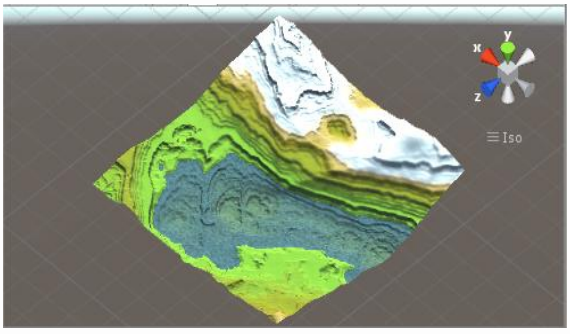
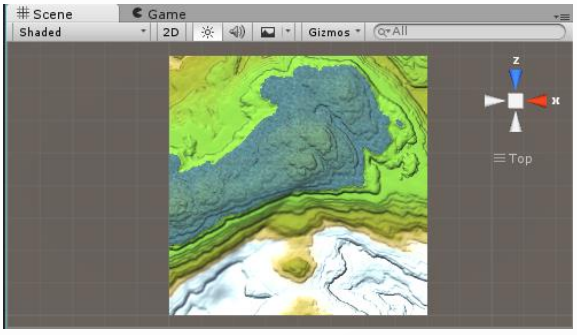
Height Shader is Set!

Your terrain will be immediately set to use the basics Height Shader Settings. Blending the Terrain colors and textures by its World Position Y axis Height from 0 up to resolution Height of the terrain.

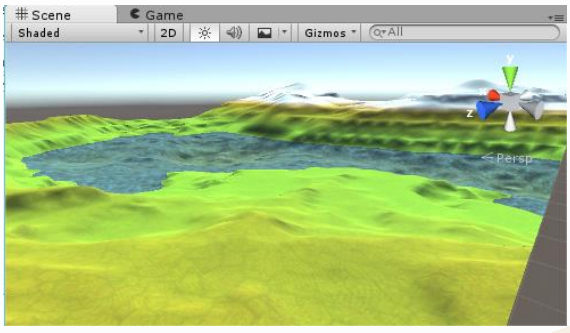
Isometric View



Ortho Top view



Perspective View



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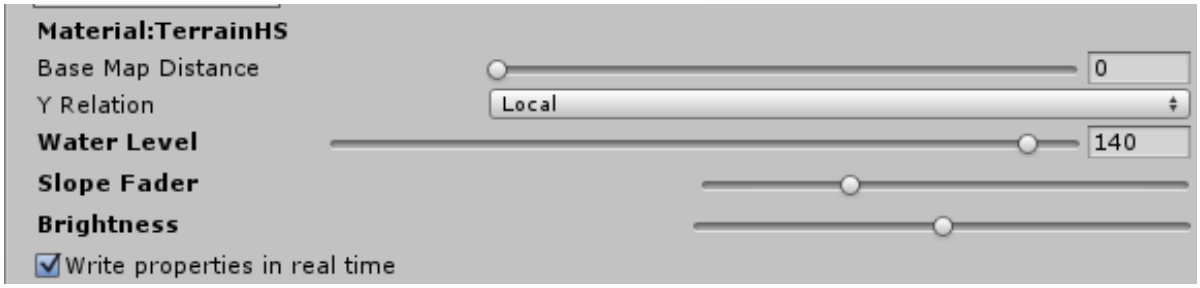
Height Shader Component Overview

Global Options



Material: Shows the name of the Material asset created for Terrain.
Height Shader *will automatically create a material for the Terrain under a new folder called "Material_HeightShader" in the Assets folder.*

Base Map Distance: ***(IF USED ON A UNITY TERRAIN)*** Fix black shadow when zoom out.

Y Relation: Sets if the transitions be Global or Local.

Water Level: Sets the Water Level of the terrain. Everything under that height will be set as "Under Water".
The Water Level value is clamped, from 0 to the "Beach Level" Height

Slope Fader: Sets the hardness of the transitions.

Brightness: Sets the brightness of the terrain

Write properties in real time toggle: Toggles editing the properties of the height shader in real time in the Editor mode.

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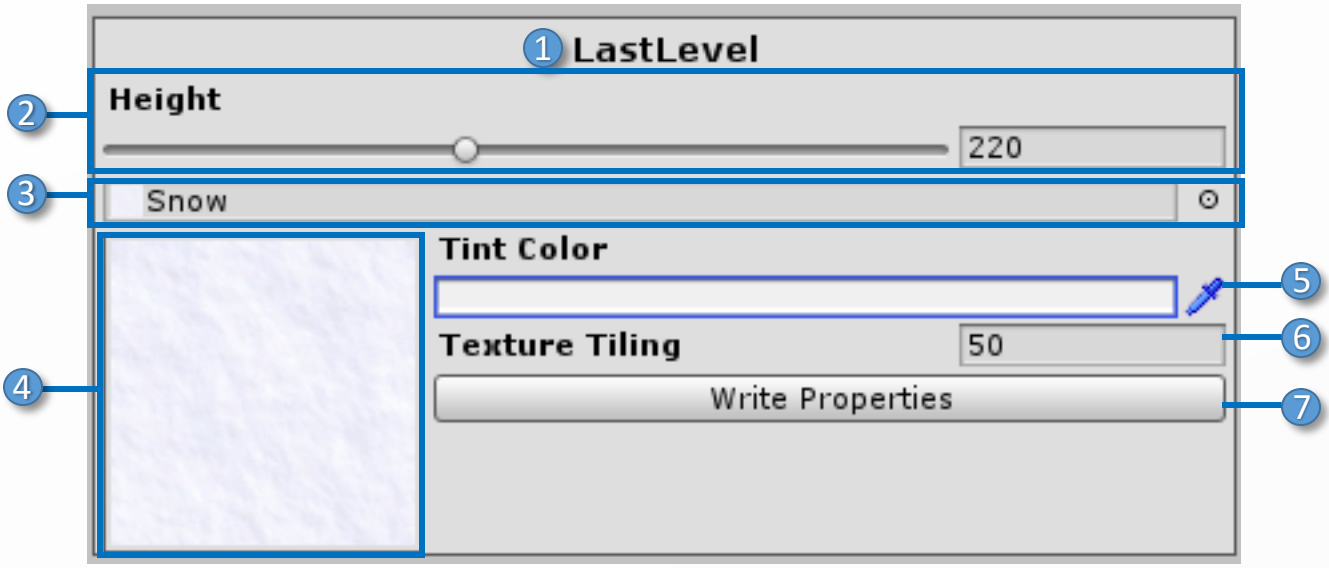
Height Shader Component Overview

Level Boxes

Editing each color and Texture blending options by Height, from top to bottom



1. **Level Name:** Shows the Level Name
2. **Height:** Sets the height where this Level start, Clamped form bottom level to top level*
3. **Texture Select Field:** Lets you set the texture for this level
4. Texture Preview
5. **Tint Color:** Sets the tinting color for this level
6. **Texture tiling:** X & Y tiling value of the Texture
7. **Write Properties button:** Sets the properties if "Write properties in real time" option is off

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Height Shader Scripting Reference

NameSpace & Classes

WahnStudio.TerrainAssets
Namespace where all the classes for the Height Shader asset are Defined

HeightShader **: MonoBehaviour**
Parent class for the HeightShader class defining Default properties and Funtions

WahnStudio.Components.HeightShader **: HeightShader**
Class of the HeightShader.cs Script. This is the user script. You can edit This Script as much as you want without being afraid of changing anything from the actual asset.

HeightShaderLevel **[System.Serializable]**
Class that defines the Levels properties and Functions

Constructor: HeightShaderLevel(string _name)

HeightShaderProperties **[System.Serializable]**
Class that defines the HeightShader properties ***associated to the HeightShader Shader***

Constructor: HeightShaderProperties(float _waterLevel)

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Default Properties

terrain — **type:** Terrain
Terrain associated to the HeightShader script. — *null if not Initialized*

meshRenderer — **type:** MeshRenderer
Renderer associated to the HeightShader script. — *null if not Initialized*

heightMaterial — **type:** Material
Material associated to the HeightShader script. — *null if not Initialized*

shader — **type:** Shader
Shader associated to the HeightShader script. — *null if not Initialized*

properties — **type:** HeightShaderProperties
All the properties used by the Height Shader.

Default Funtions

Initialize(Material material) — **returns:** void
Sets the Height Shader to Default Values
use DefaultInitialize(Material material) when overriding to pass the default code

ReadProperties () — **returns:** void
Reads the HeightShader Shader properties values and sets all HeightShader script component properties to the values readed
use DefaultReadProperties() when overriding to pass the default code

WriteProperties() — **returns:** void
Sets the HeightShader Shader properties to the values of HeightShader script component properties
use DefaultWriteProperties() when overriding to pass the default code

CurrentGlobalToLocal() — **returns:** void
Sets the current look of a Global view for Local use, automatically changes the Relation Mode

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The properties property

properties **type:** HeightShaderProperties
The container for the properties used by the Height Shader.

properties.waterLevel **type:** float
The height of the water level **Clamped values:** 0, level[1].height

properties.slopeFader **type:** float
The hardness of the blending made by the Height Shader Shader
Clamped values: 0,1

properties.brightness **type:** float
The brightness of the terrain material **Clamped values:** 0,1

properties.baseMapDistance **type:** float
The brightness of the terrain material **Clamped values:** 0,30000

properties.relationType **type:** Enum (RelationType)
The brightness of the terrain material **Clamped values:** 0,30000

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The properties.levels property

properties.levels **type:** HeighShaderLevel[5]
The properties container for each blending level

Read Only properties. levels[index].name **type:** string
The Name of each blending level

properties.levels[index].texture **type:** Texture
*The texture of the **index** level for blending*

properties.levels[index].color **type:** Color
*The color of the **index** level for blending*

properties.levels[index].height **type:** float
*The value Y in World Space Position of the **index** level for blending*

properties.levels[index].textureTiling **type:** float
*The X Y tiling of the texture in the **index** level*

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Alternative Uses

WahnStudio/HeightShader Shader

The Height Shader script component is created to be used in any Unity Terrain Asset or any object with a Mesh (Mesh filter and Mesh Renderer associated), but the HeightShader Shader is not.

You can set any material to use the shader. If you do so the shader will check the Y axis World Position of any mesh and will blend the selected textures and colors in the Material asset you choose.

Play with it, is yours!