Voxelizer - 2D to 3D - Convert any image to 3D voxels

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Introduction

Voxelizer is a procedural generator of [voxel](#) that convert pictures as png, jpg and not animated gif, in cube based voxel environment.
With this asset will be easy to generate your voxel world starting from pixel art images.
This is only some of the Voxelizer features and in this document you will see how you can use this asset to have the best.

I really care about supporting the more different ways to use this asset and if you feel that something it's missing and should be implemented in future version please let me know at:
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All the features that you will see are customizable inside the editor without touching a single line of code!

Documentation

The Following documentation will go through every customizable parameter of Voxelizer main class. You'll find it useful to read before the [first start guide](#) as it gives a fast overview on this asset base mechanics.

Setup Pictures

Please follow strictly this part in order to import in the correct way your image.
First drag in your project the image and select the Inspector.
Change these values in order to correctly import your image.

- *Texture type:* **Advanced**
- *Read/Write Enabled:* **YES**
- *Import Type:* **Default**
- *Alpha from Grayscale:* **NO**
- *Alpha from Transparency:* **YES (if your image has transparent pixel)**
- *Generate Mip Maps:* **YES**
- *Then click* ***Apply***

Use this image as reference*:*
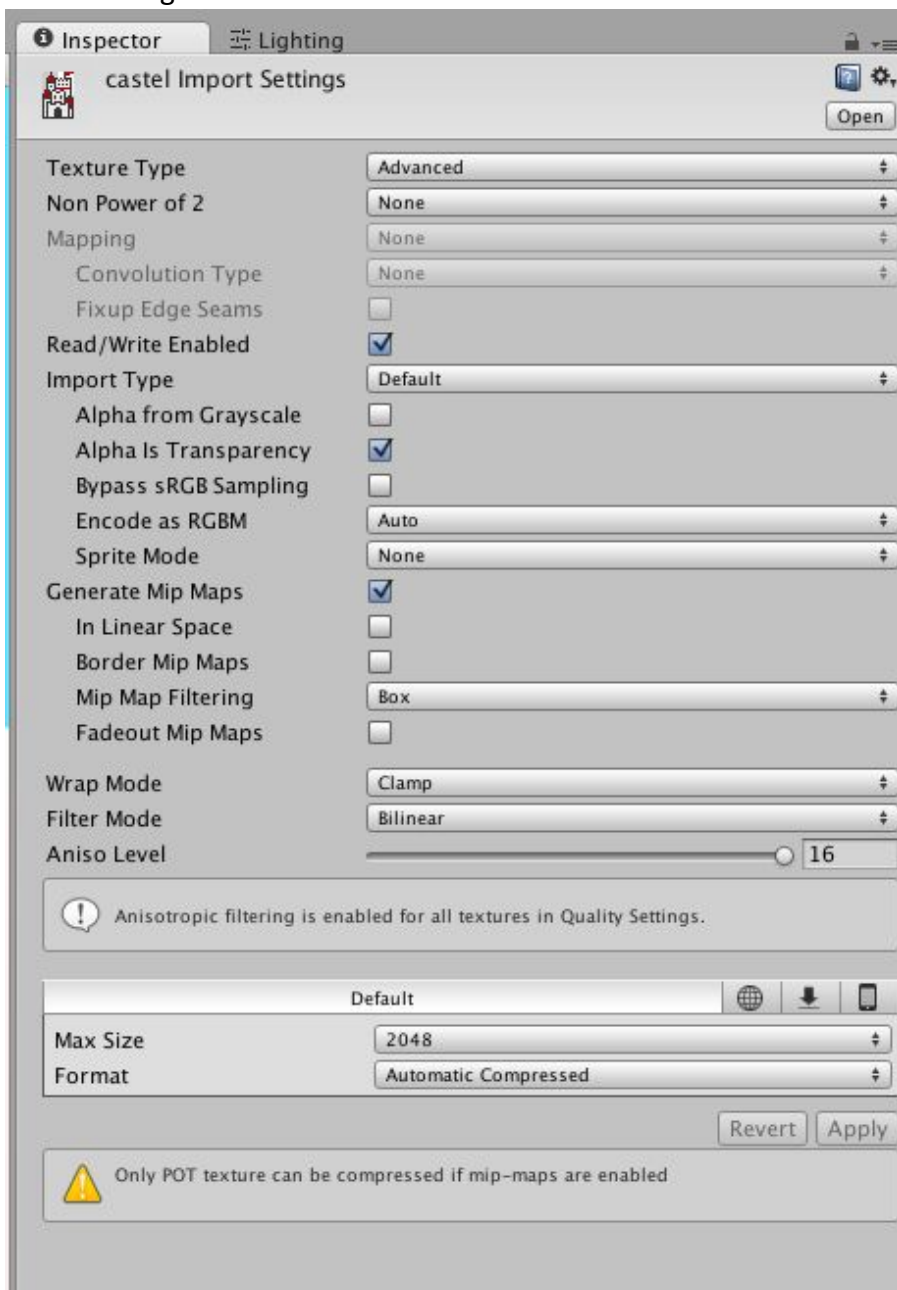
Voxelizer.cs
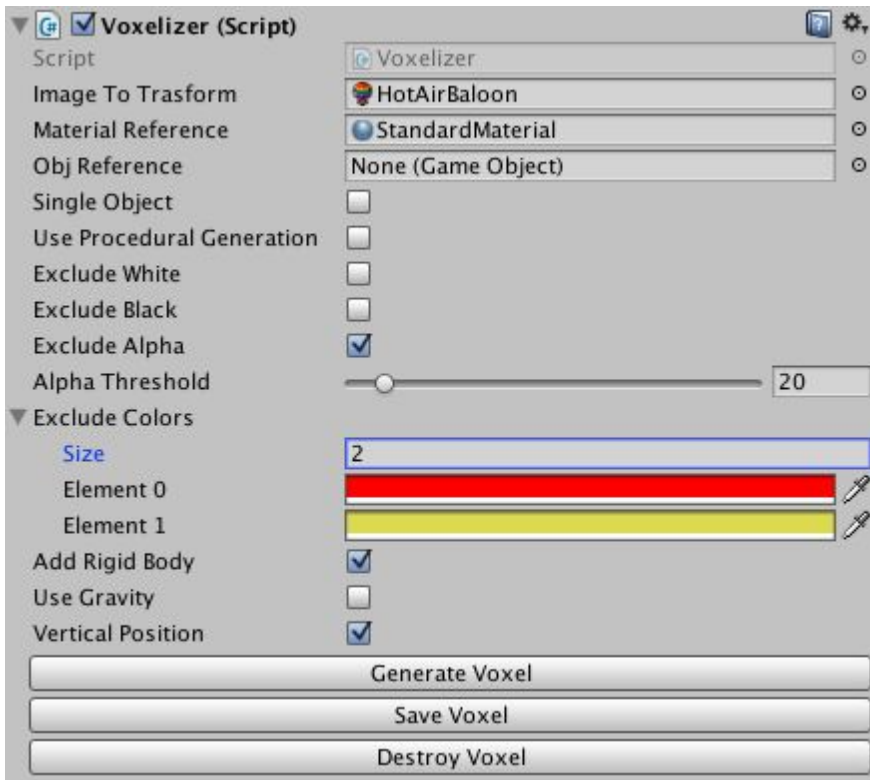
This is the main component of the the assett. With this class you'll be able to generate the Voxel.
List of parameters:

(Image) Image To Transform: **The image that you will use to transform in Voxel**
(Material) Material Reference: **The material that will be use for the Voxel generated**
[OPTIONAL](Game Object) Obj Reference: **The mesh that will be used to generate the Voxel. If you don't specify any a Cube mesh will be use.**
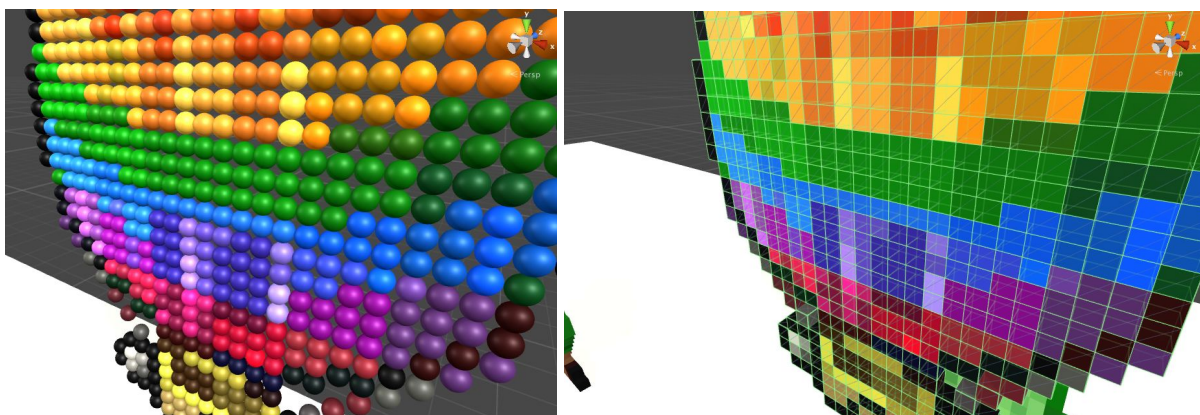
Sphere VS Cubes Generation

(Bool) Single Object: **VERY IMPORTANT: This bool allow you to create a SINGLE OBJECT containg mesh and Materials OR maintain the voxel cubes as children of the gameobject.**

*[Work in **Play Mode Only**](Bool) Use Procedural Generation:* **This bool allows to create the entire model in progressive mode, it's useful if you want to use this asset in play mode and don'.**
It's recommended to use this mode when you have to generate lots of model in Play mode.

(Bool) Exclude White: **Exclude white color from rendering of the Voxel**
(Bool) Exclude Black: **Exclude black color from rendering of the Voxel**
(Bool) Exclude Alpha: **Exclude color with Alpha value from rendering of the Voxel**
[1-255](int) Alpha Threshold: **Is the value used in "Exclude Alpha" . Colors with alpha value below this value will be not rendered**
(Array of Colors) Exclude Colors: **Exclude specific color from the rendering of the Voxel**
(Bool) Add Rigid Body: **Will add a rigidbody to ALL the children of the Voxel object**
(Bool) Add Gravity: **Will add a Gravity to the rigidbody added (if present)**
(Bool) Vertical Position: **Choose between Vertical rendering of the mesh (perpendicular to the floor) or horizontal rendering (parallel to the floor)**

BUTTONS
*Generate Voxel :***Generate the Voxel model in Editor mode**
*Save Voxel :***After you generate the model select this button to save the prefabs at this path:**

Assets/Voxelizer - 2D to 3D - Convert any image to 3D voxels/SavedPrefabs

*Destroy Voxel :***IMPORTANT USE this button EVERYTIME you want to generate another model with different parameters as this procedure:**
   1. **Generate Voxel**
   2. Change some parameters
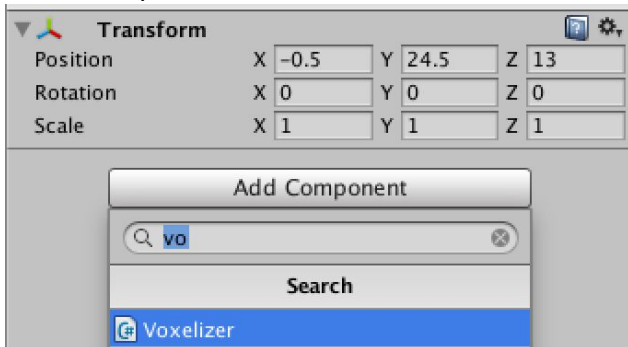   3. **Destroy Voxel**
   4. **Generate Voxel**

First Start Guide

Create a new Scene
Add a Directional Light
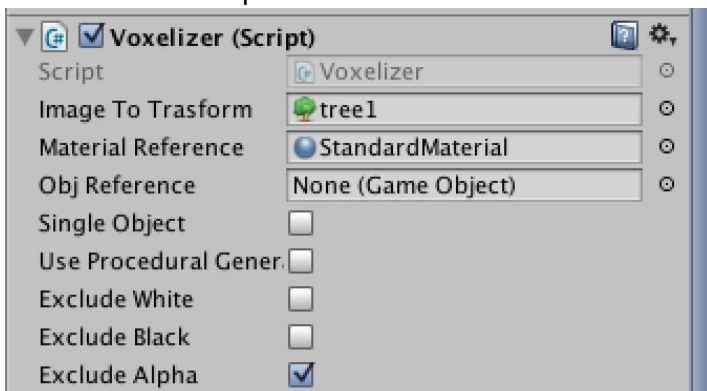Create Empty Game Object
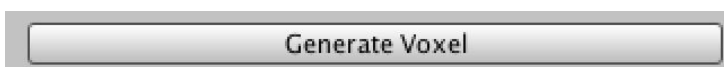Add a component and look for Voxelizer

Click on Image to Transform and Select tree1
Click on Material Reference and Select StandardMaterial
Click on Exclude Alpha

Click on Generate Voxel

Go to the Scene and admire your model

Find lots of inspiration here

https://www.google.it/search?q=pixel+art&espv=2&source=lnms&tbm=isch&sa=X&ved=0ahUKEwigl_jF
xMzSAhVFEpoKHXaBDLIQ_AUIBigB&biw=1440&bih=742#tbm=isch&q=pixel+art+8+bit&*

http://8bitdecals.com/8-bit-image-gallery/

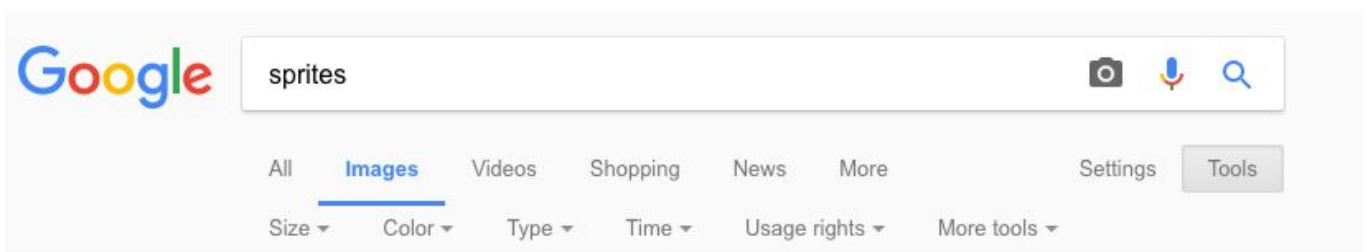# http://www.deviantart.com/browse/all/designs/?order=9&q=pixel+art&offset=0
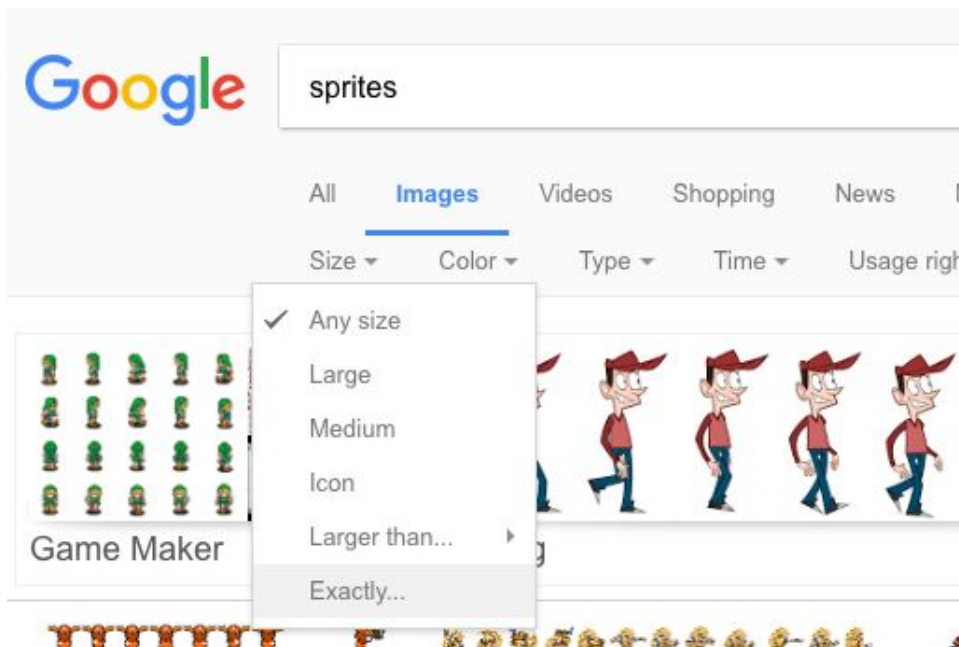
Extra

How to find pixel art images:

Go to Google images
search for sprites or what you are looking for: Sword, guns, castle

Click On Tools→ Size -> Exactly...

Set 16x16 pixel size, but try different resolution as 32x32

https://www.google.it/search?q=sprites&biw=1920&bih=921&tbm=isch&source=lnt&tbs=isz:ex,iszw:16,iszh:16