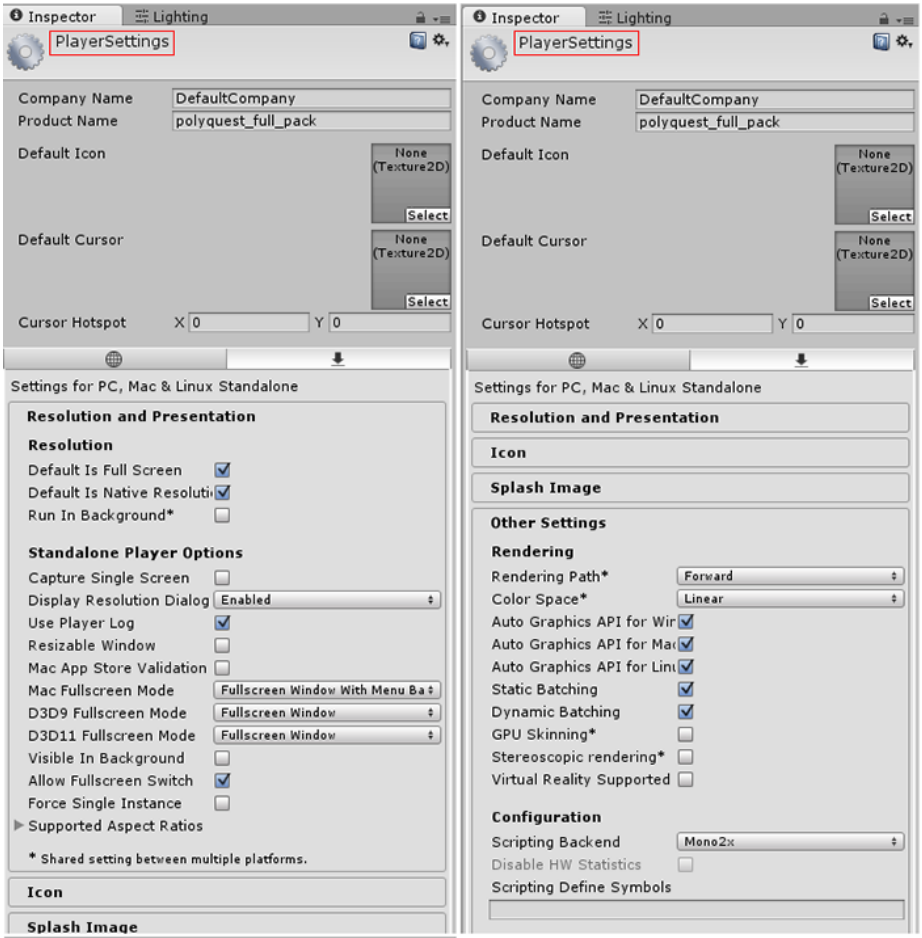
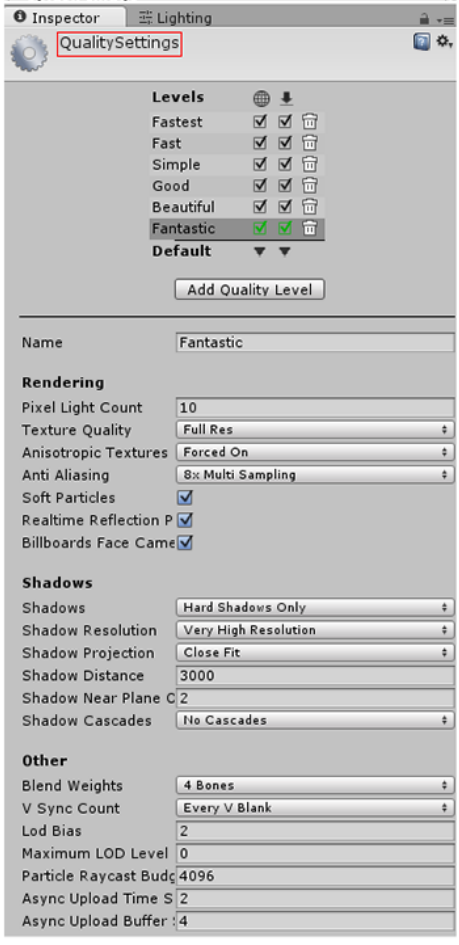
# Polyquest Guidelines:

## A- Project Quality and Player Settings:

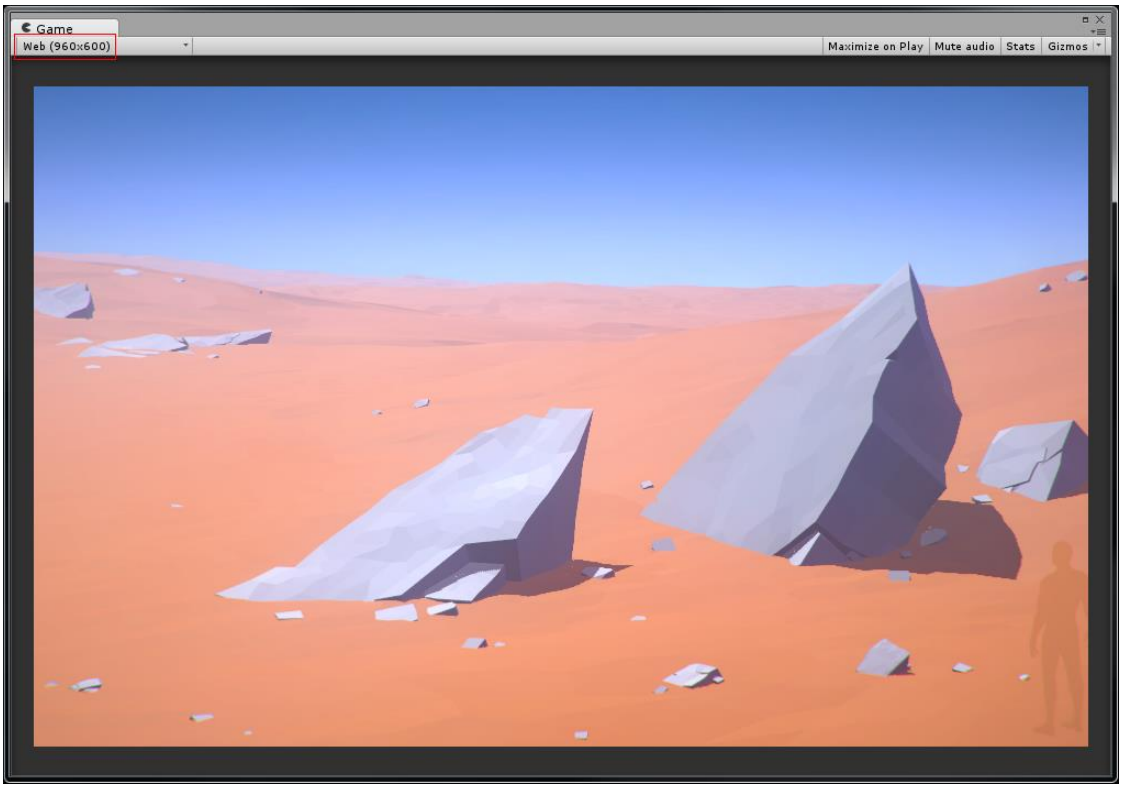
Before you start using the pack, make sure you have the right player & quality setting (see below):



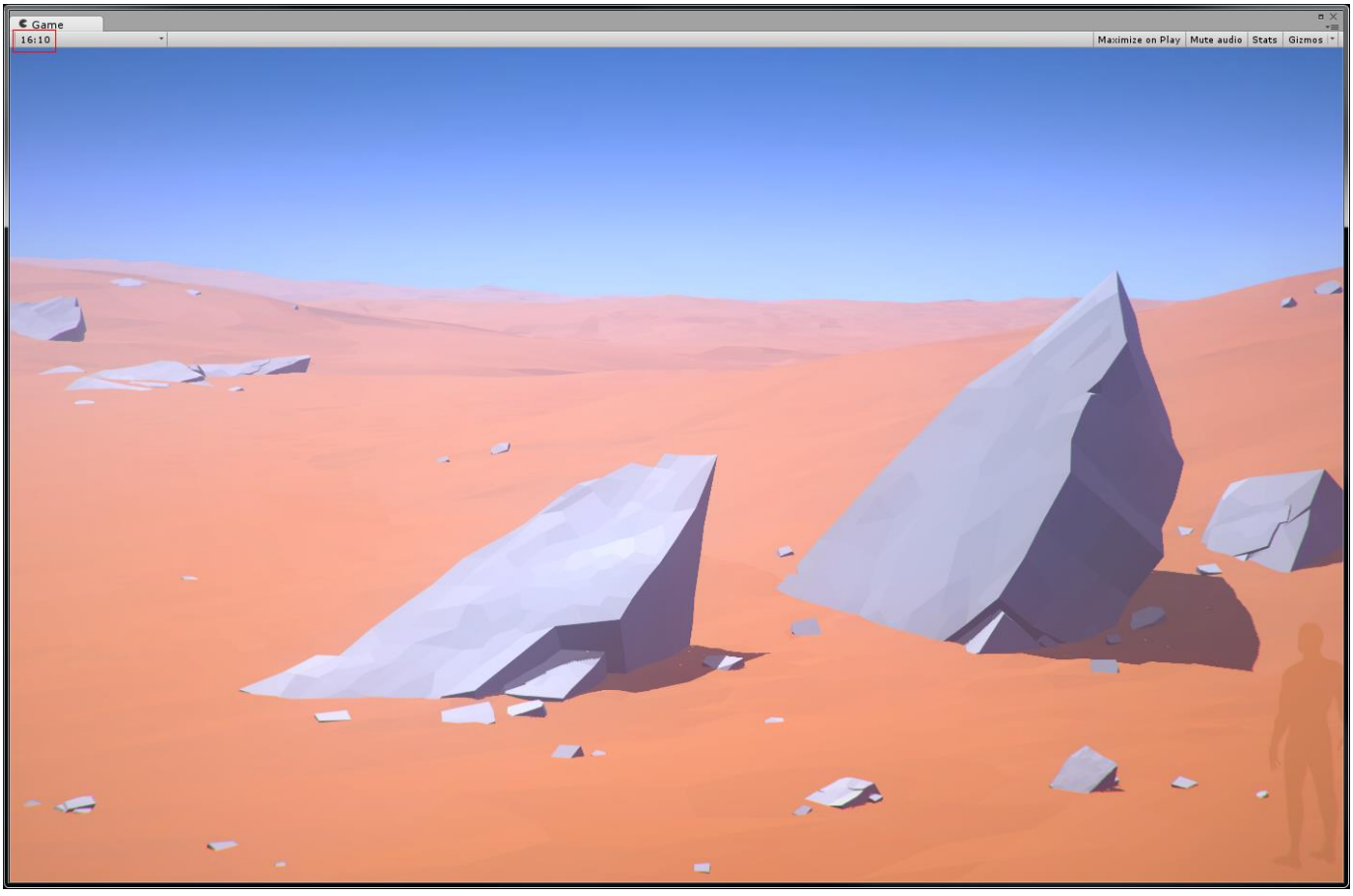



## B- Project Resolution:

Before you start using the pack, make sure you have the right resolution settings in the game window, make sure you set it to 960x600  (see images below):



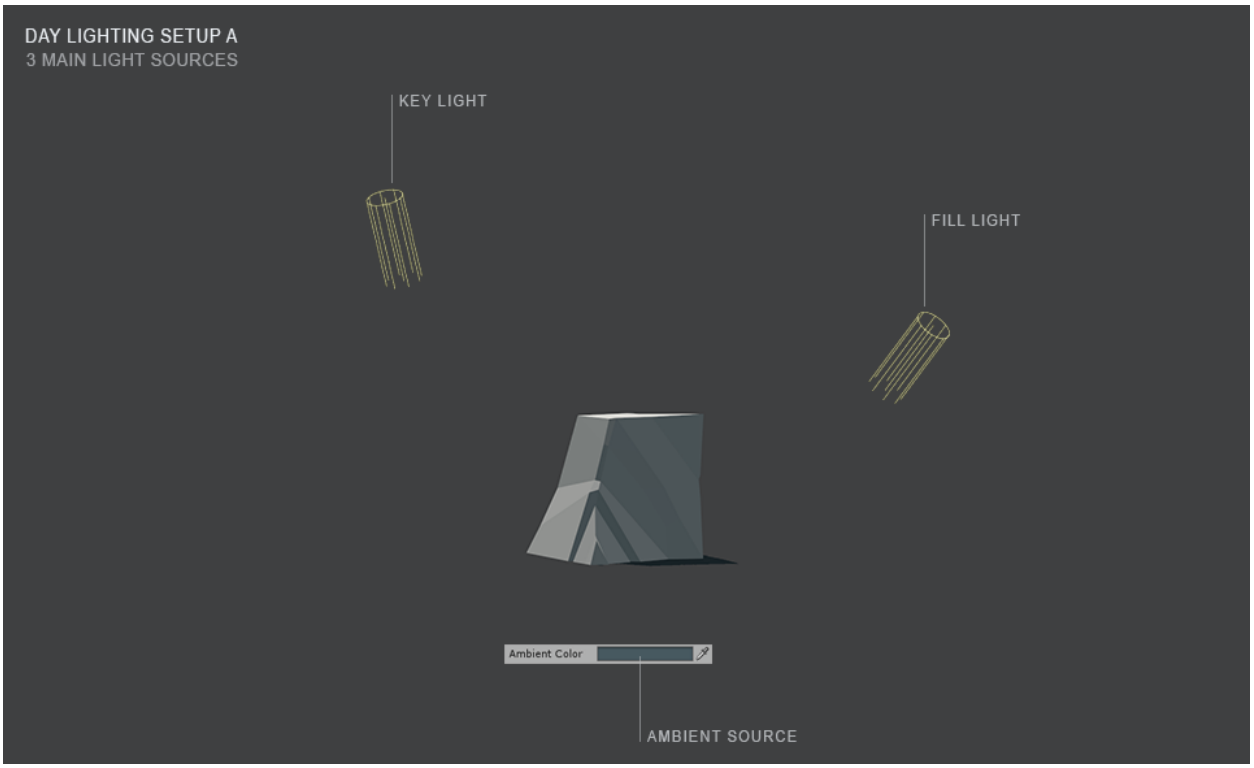

Or you can set it to any resolution that has the 1.6 resolution, for instance like the 16:10 preset (see image below):



## C- Lighting:

### 1-Day Lighting Setup A:

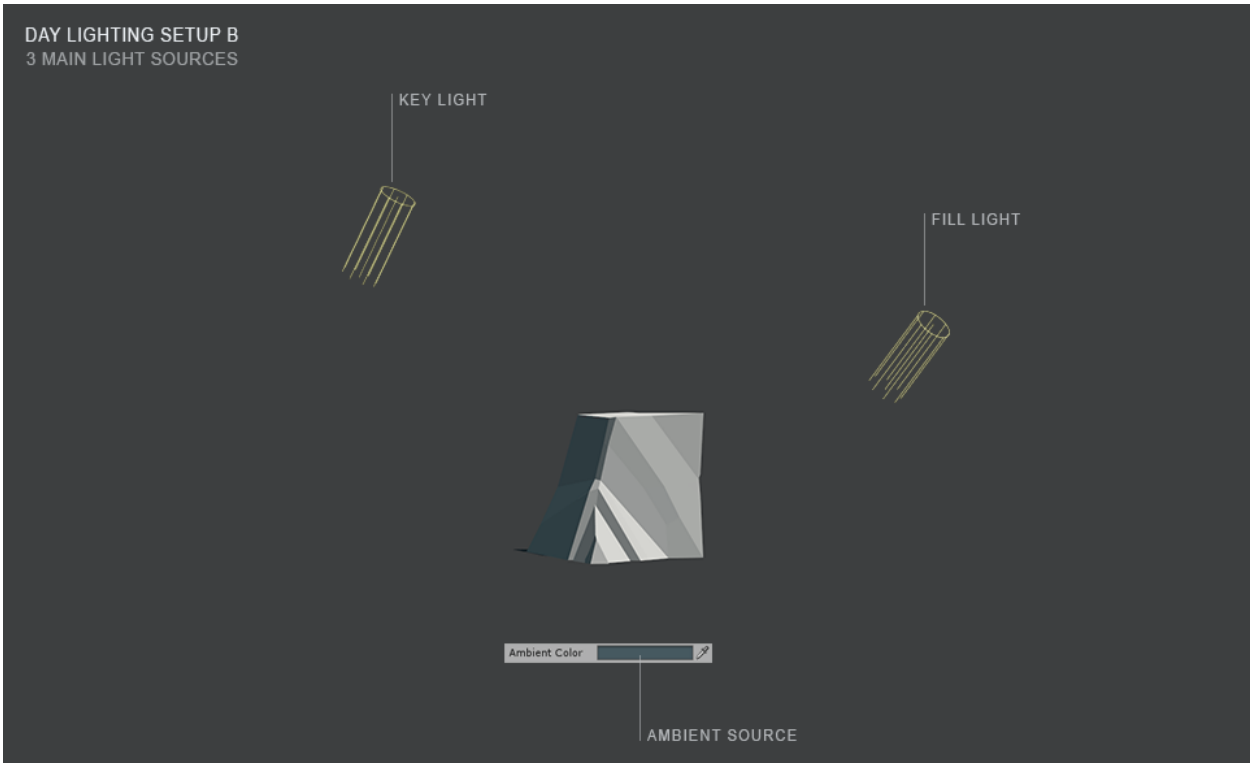
The day lighting used in the package is a very simple one, it consists of one directional key light, one directional fill light and the default ambient light found in the lighting tab, not that the ambient source could be a simple color or a skybox (see image below):




"Day Lighting Setup A" provided in the "scenes" folder.

### 2-Day Lighting Setup B:

This lighting setup is simply a variant of "Lighting Setup A", the fill light and ambient source are the same, only the Key light has a different direction (see image below):



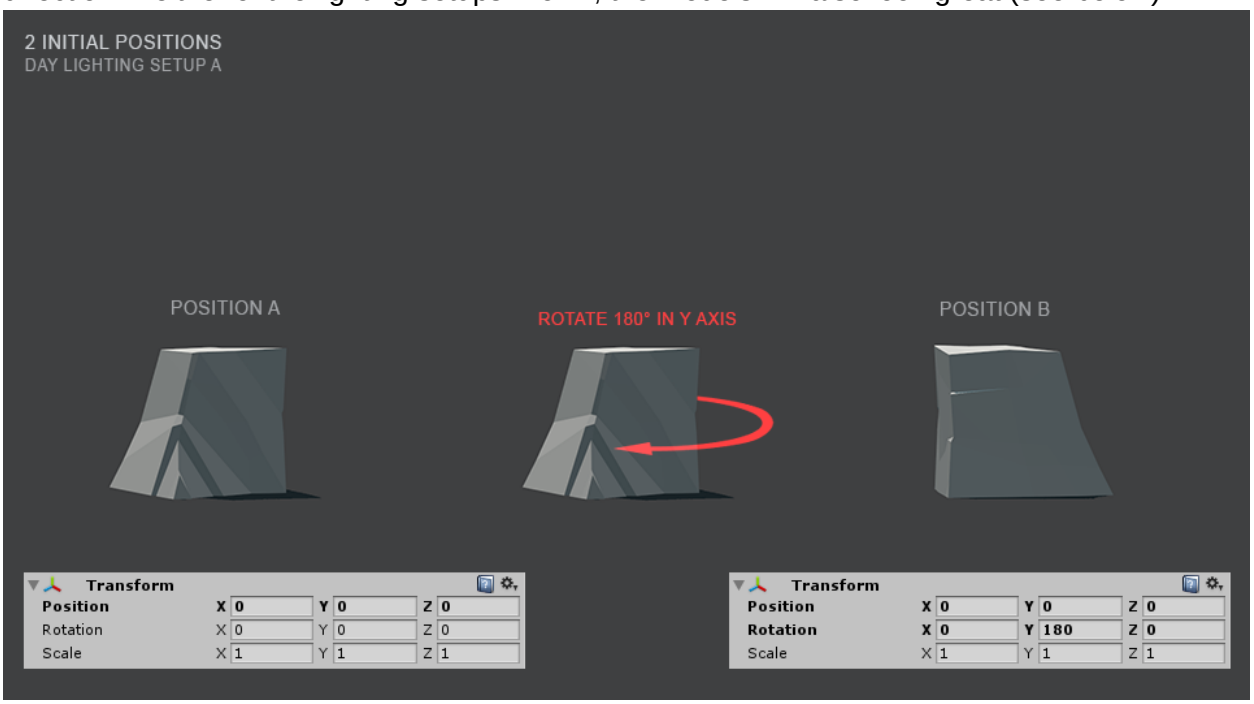

"Day Lighting Setup A" provided in the "scenes" folder.

**3-Night Lighting Setup:**

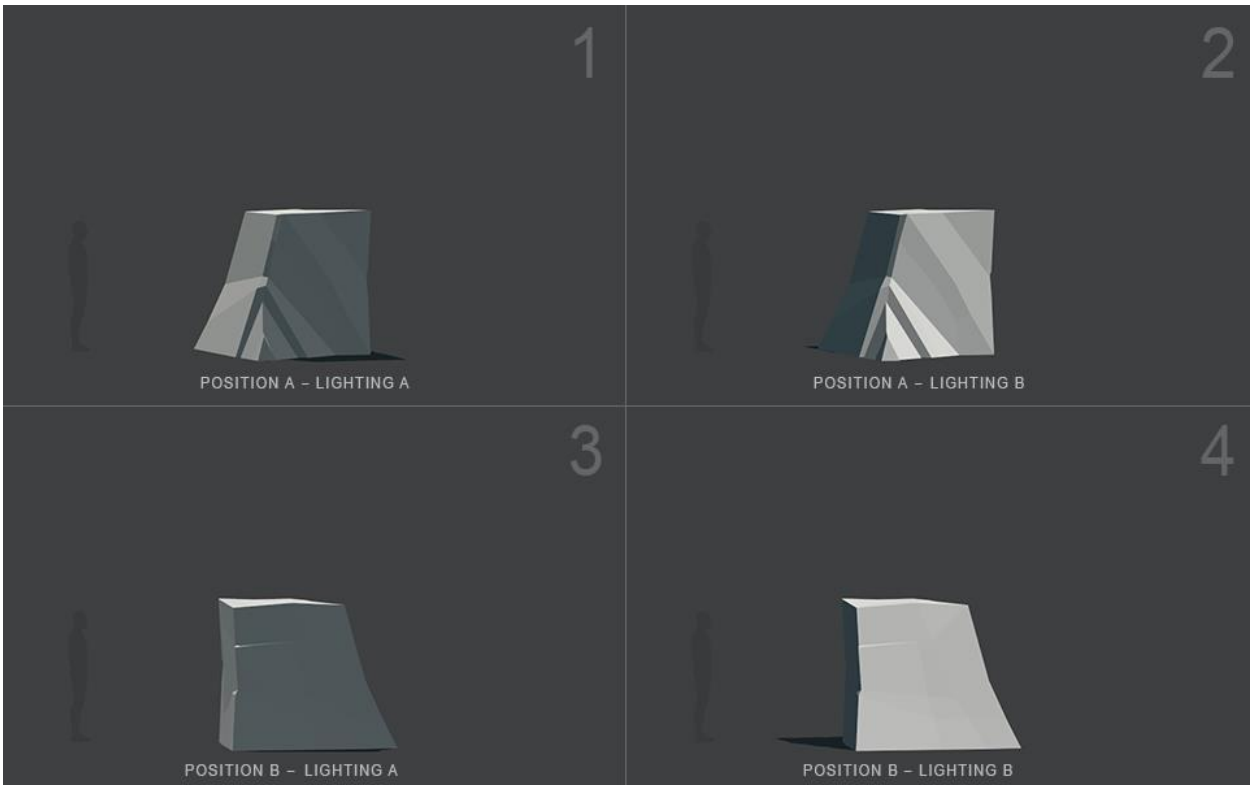
To create a night lighting setup, just start by dropping on of the day lighting setups ( A or B) into your scene and tone down the intensities of your 3 light source. Then start adding point lights, spot lights or area lights and adjust their intensities and colors to get the look you want. Now that lighting is setup, start placing your models so they look good in it. This is how it was done in the night example scenes (see image below):

**4-Lighting & Layout:**

If you open the provided “lighting_day_setup_A” scene or the ” lighting_day_setup_B” scene, and just drop the models into it, everything will look great. You now have 2 lighting situations where all your models are looking great. Not only that, if you rotate any of those models 180° in the Y direction in either of the lighting setups A or B, the models will also look great (see below):



So now you have 4 situations (situation 1,2,3 & 4 as you can see in the image below) where all your models are looking great (see image below):



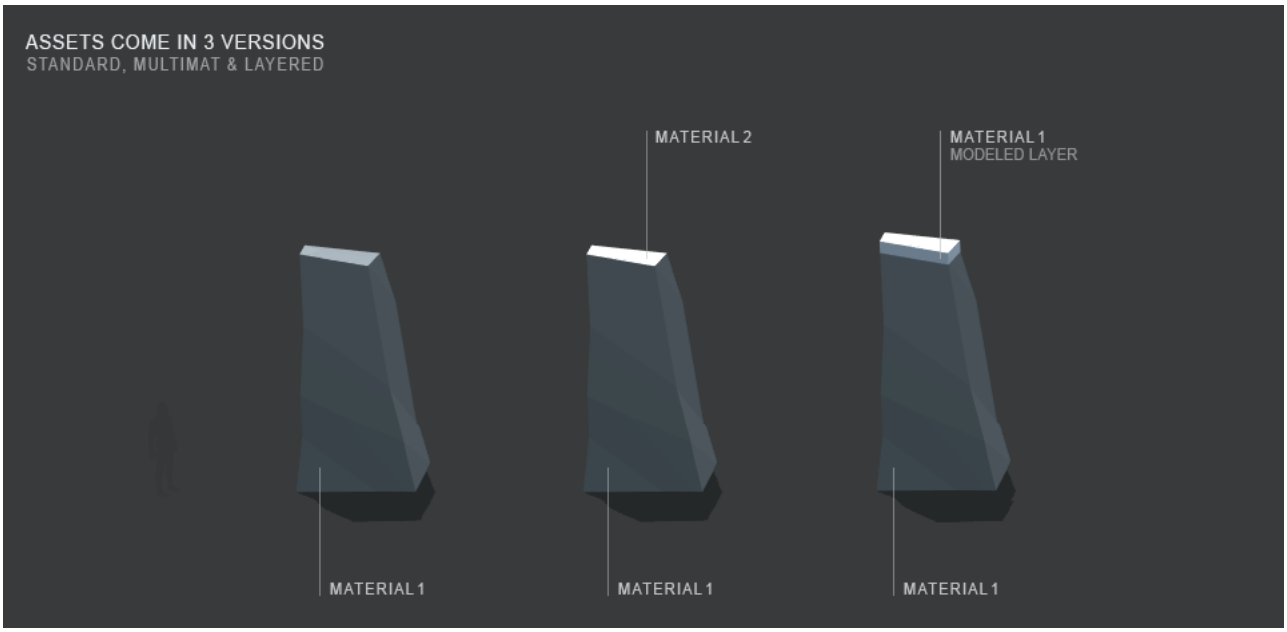

Those 4 situations are a great starting point. Ideally one with start with one of them, for example in situation 1 you have the “day lighting setup A” plus the default position of the model (no 180° rotation), then **from here** you can start rotating the lights a bit or rotating the geometry in another direction to obtain the look you want. This is how the example scenes where made.

**5-Layout:**

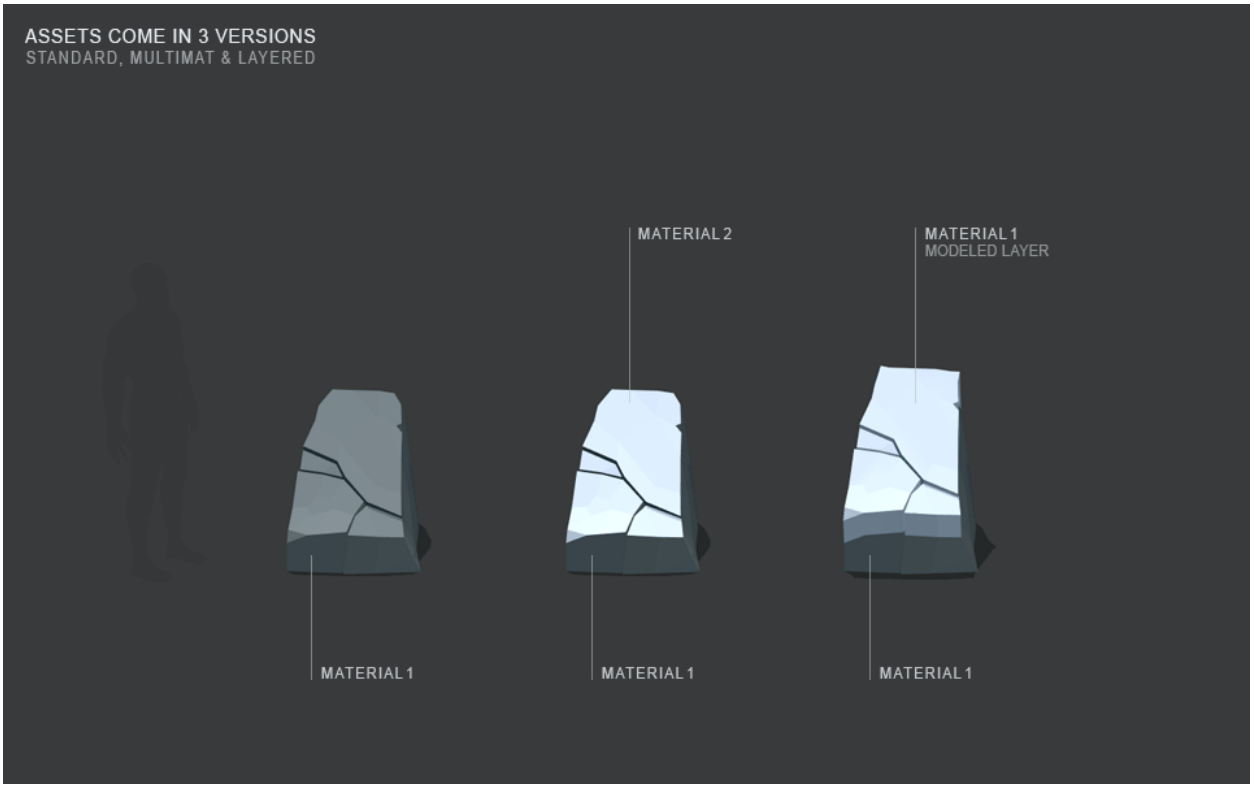
The **most efficient** way for laying out your scene is to display the **“scene” window” and the “game window” at the same time**. Then you move stuff in the “scene” window while constantly checking what’s happening in the “game” window.

## D- Models Versions:

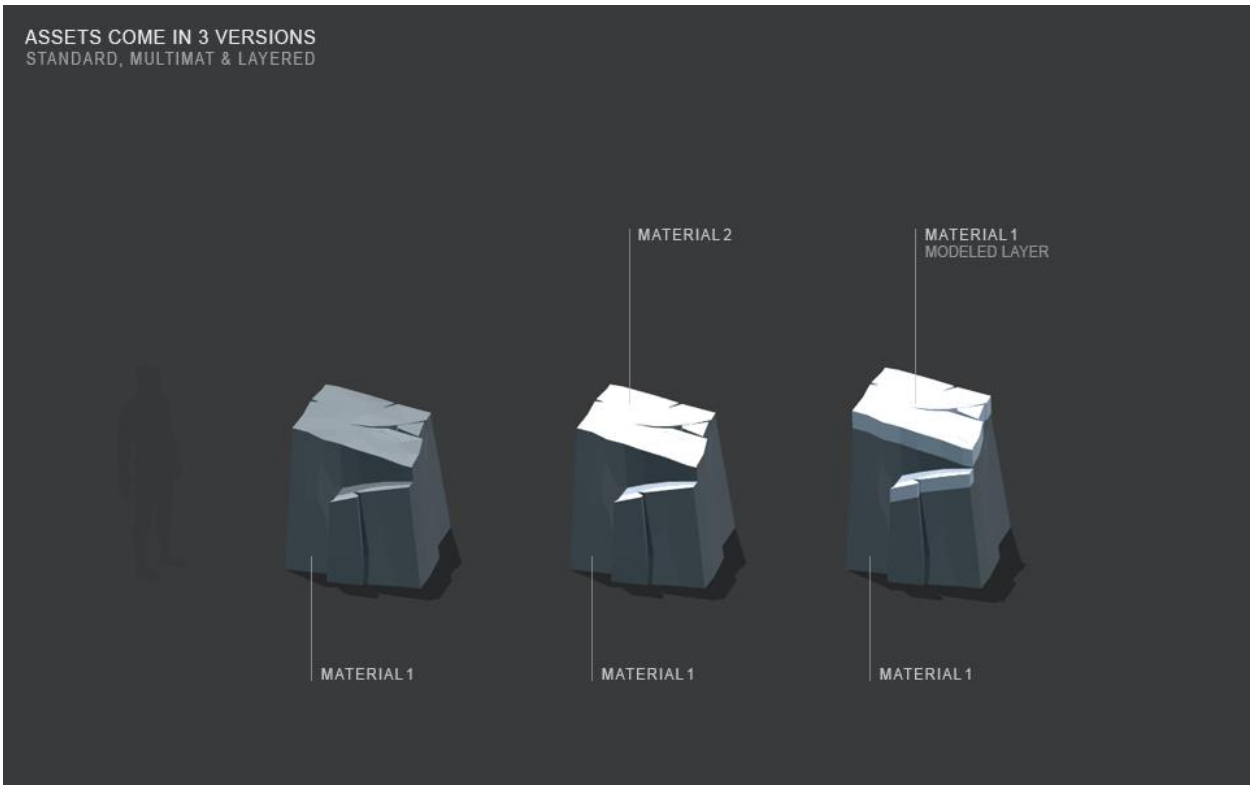
All cliff, rock, stone, gravel and ground models come in 3 different versions (see below):



The **“standard**” version means the models have simply 1 material. The **“multimat”** version means that the models have 2 materials, the first material for all the faces facing up (in the Y direction) and the second material for all the rest. This version is very useful if you want different material properties, for example one for the rock surface (material 1) and another one the snow surface (material 2) (see below):



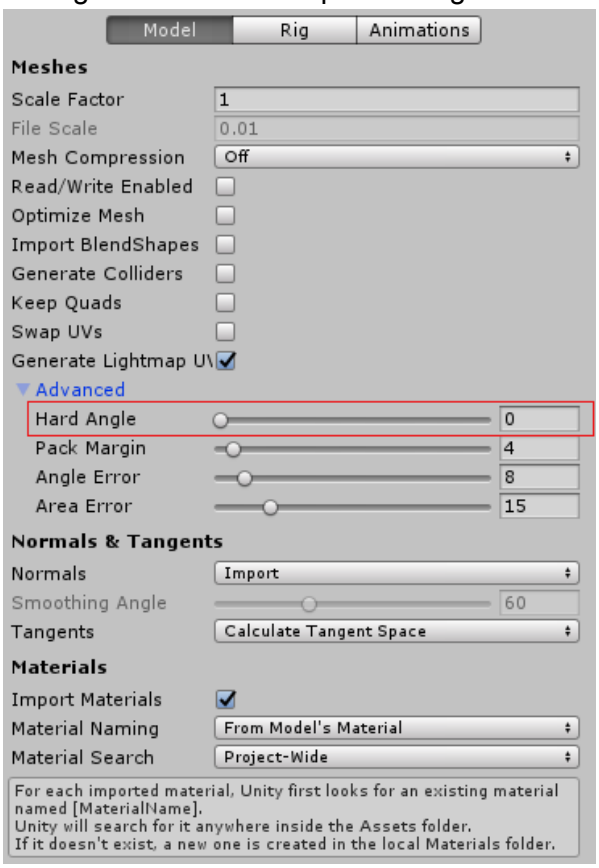

The **“layered**” version means the models have a layer of snow, ice, grass, sand or any type of other material (depending on what you need). This thickness is modeled into the geometry itself (see image below):




Not that in the project “models” folder you have 3 subfolders clearly labeled as “standard”, ”multimat” & “layered” where you will find the 3 different versions for all the assets.

## E- Models Smoothing Groups:

Not that every vertex of each model was carefully placed during the modeling process in Autodesk Maya. As a result of that, smoothing groups are carefully crafted and in order to preserve this in Unity, so you **must always** keep the “Hard Angle” option of the “Advanced” settings in the “model import settings” to **0** which is already set by default (see image below):

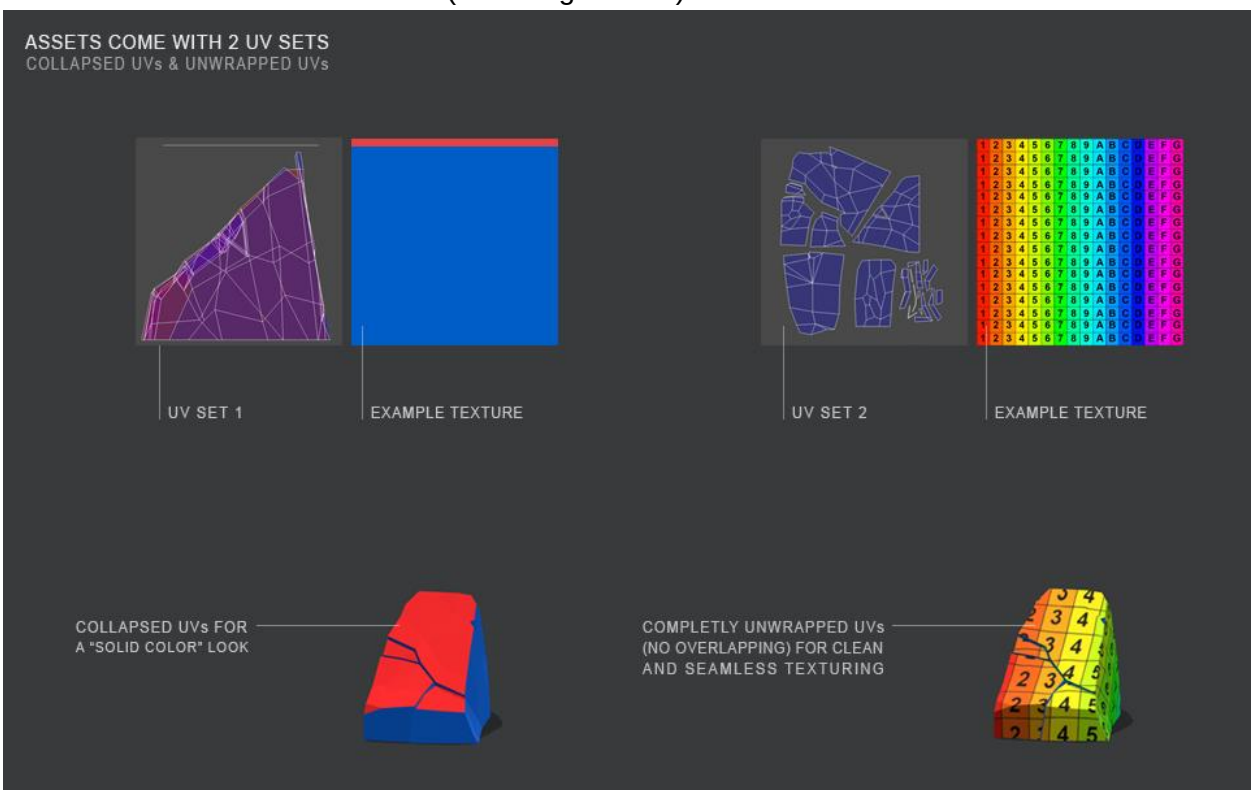



Otherwise Unity will create its own smoothing groups which can lead to undesired results.

## F- Models UVs:

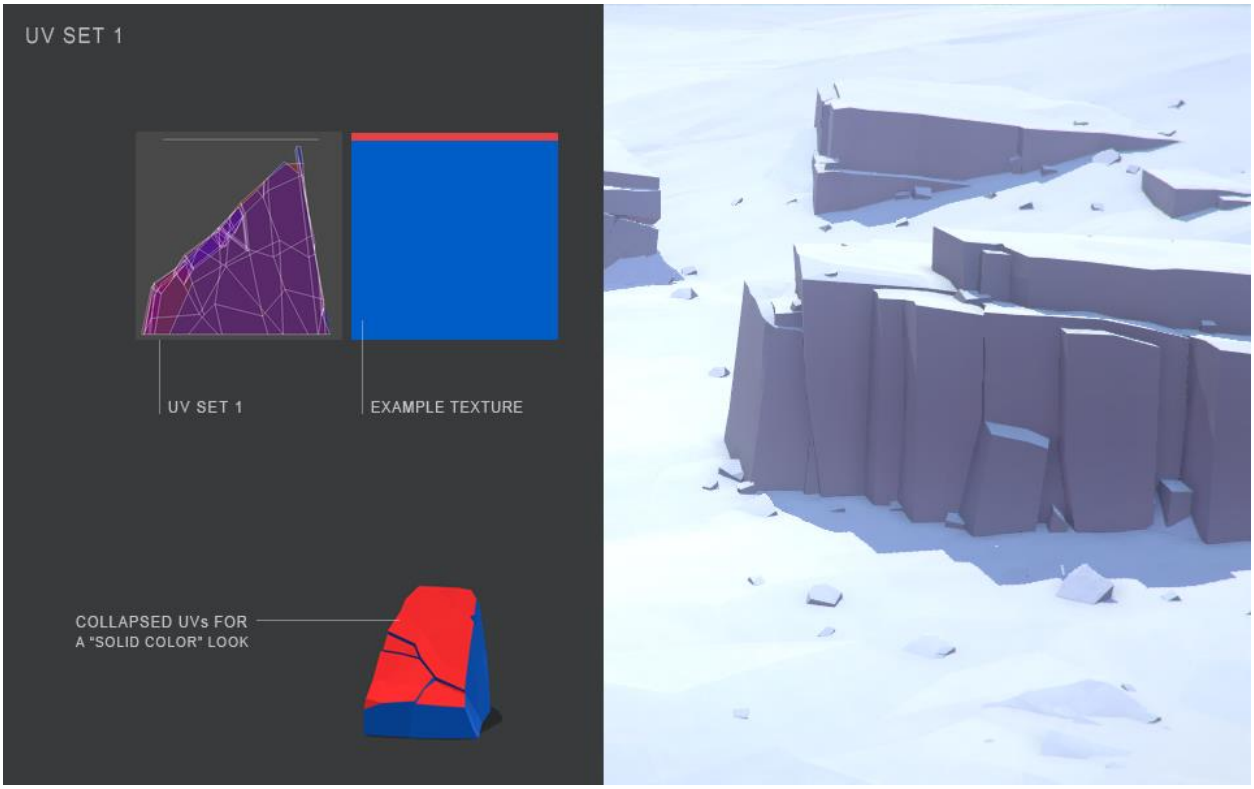
### 1- Two separate UV sets:

Each asset comes with 2 UV sets (see image below):



**2- UV set 1:**

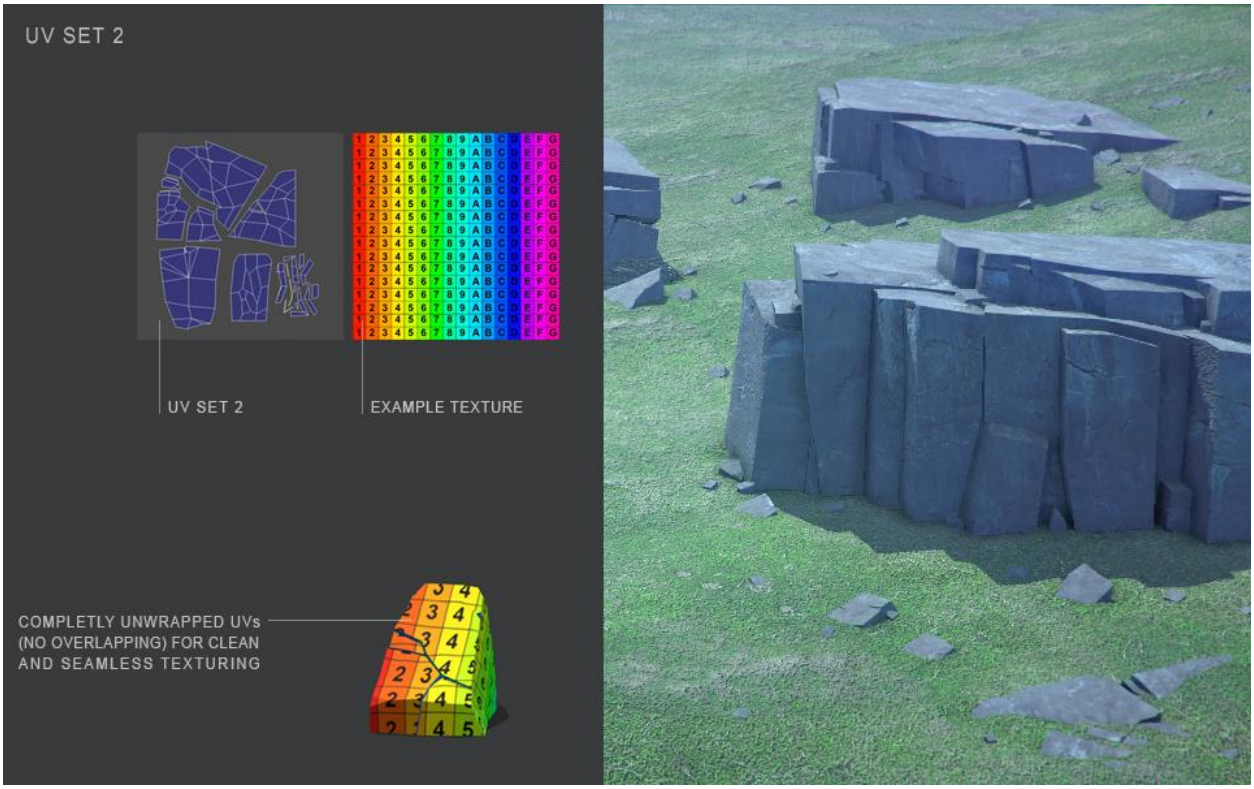
UV set 1 should be used when you're going for a "solid color" look, where each face has one color value. In this case there is no traditional texturing and the used texture is simply a color swatch that gives one solid color for each face. To give you more control, all faces facing up, have their UV shells collapsed in the upper part of the UV space (see image below):



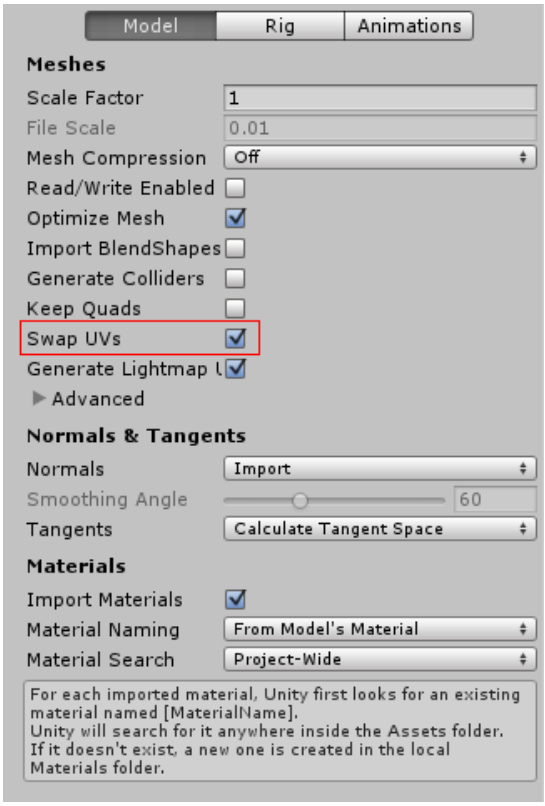

*Not that you apply a gradient if you want that by simply putting it in the blue part of the texture.

**3- UV set 2:**

UV set 2 set is carefully unwrapped by hand and there is no overlapping faces. This UV set should be used when you are applying a texture to your models (see image below):



**4- Switching between UV set 1 & UV set 2:**
When you want to use an image textures in the material applied to your scene models, or when you simply **open the example scenes** ending with "_TX" **make sure** you check the **"Swap UVs"** option **ON** in the "model import settings" (see image below):




Make sure you do that for all models located in these 3 folders:
Assets/models/models standard
Assets/models/models multimat
Assets/models/models layered

## G- Lightmapping Troubleshooting:

If you are creating new lightmaps in a new scene and you are getting some black lines seams on your objects that's because in Unity 5 the "Baked padding" option for lightmaps (in the "Lighting/baked GI" tab) which normally fixes this problem (when set to 6 or 7) doesn't work, it's broken.

-The first solution would be to tweak the "Scale In Lightmaps" value in the "lighting/Object" tab for the object having the black lines. Start with 6 then you can go up to 20,30 or 40 this really depends on each scene. Refer to the lightmapped example scenes ending with "_LM", this will give you an idea on how to fix this problem.

-If you are still getting black lines, you can resort to the second solution. Select the models in the "models" folder, and in the "import settings" in the inspector, under "advanced" set "Hard Angle" to 10. This will affect the smoothing groups a bit but will get rid of the black lines, only do this as a last resort.

-Hopefully in the future, Unity will fix the "Baked padding" bug and the black lines will disappear forever.

## H- Special Notes:

1-Male Character silhouette seen in screenshots is not included in the package.

2-“Simple Pixelizer” camera shader used to make the pixelated looking effect in the screenshots is not included in the package but could be feely downloaded here: https://www.assetstore.unity3d.com/en/#!/content/3579

3-"One or more textures on this 3D-model have been created with images from cgTextures. These images may not be redistributed by default. Please visit cgTextures for more information."

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