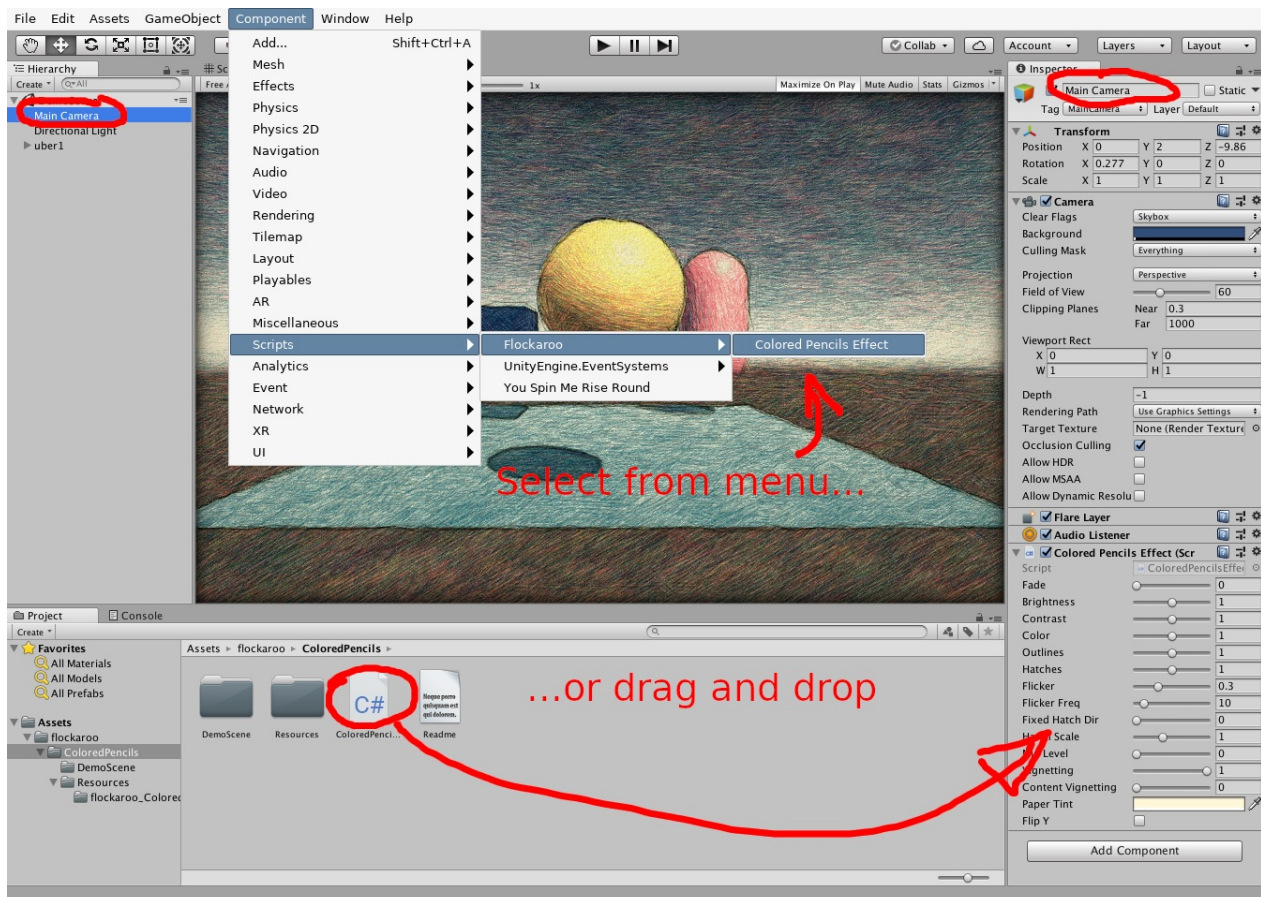


# Colored Pencils - Unity3D Image Effect

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## How to use

Select your camera node and then simply add "ColoredPencilsEffect" script to camera components (can be found in Assets/flockaroo/ColoredPencils/). You can drag/drop it to there or choose it from the menu (Component/Scripts/Flockaroo/ColoredPencils).



**Warning!!** The subfolder "flockaroo\_[effect name]" in "Resources" is needed by the effect script for unique identification of files and should not be removed or renamed.

## Parameters

The shader provides the following parameters:

### Input/Output

Parameter	function
Input Texture	take this texture as input instead of the camera
Render To Texture	render to texture instead of screen
Output Texture	texture being rendered to if above is checked
Output Mipmap	generate mipmap for output texture

### Effect Masking

Parameter	function
Effect Mask Texture	1 = masked out, 0 = effect applied
Effect Mask Fade	-1..1 fade effect mask texture (0 off, -1 = inverted mask tex)

### Main faders

Parameter	function
Fade	0 = effect image ... 1 = original content
Pan Fade	0 = effect image ... 1 = original content - pan from left to right

### Source

Parameter	function
Brightness	adjust brightness of the content before applying the effect
Contrast	adjust contrast of the content before applying the effect
Color	the color intensity of the effect

### Effect

Parameter	function
Linear2Gamma	the effect was originally made for gamma colorspace. if you use linear space (default in recent unity) check this box to get better results
Shader Method	0 = original shader 1 = newer version (faster, other color scheme) 2 = even faster
Outlines	strength of the pencil outlines
Outline Color	color of outlines
Hatches	strength of the pencil hatches
Outline Error	drawing-error of the pencil outlines

Parameter	function
Flicker	activates a flicker effect on cross-hatches and outlines
Flicker Freq	flicker frequency in Hz
Fixed Hatch Dir	makes crosshatches all parallel and content independent
Precalc Gradient	uses a precalculated gradient (only in Shader Method 2!!)
Precalc Gradient Flip	to y-flips precalculated gradient if necessary
Hatch Scale	scale of the hatch strokes (line thickness)
Hatch Angle	rotate hatches
Hatch Length	length of the hatch strokes
Mip Level	affects the detail of the strokes, and slightly disorients the strokes direction close to color jumps (only works properly for Unity versions higher than 5.5)
Vignetting	darkening the window border
Content Vignetting	fade content to white paper on border

## Background

Parameter	function
Paper Tint	color of the paper being drawn on
Paper Roughness	roughness of paper surface
Paper Texture	custom paper texture (background)

## Other

Parameter	function
Flip Y	image Y flip
HDRP Gamma	check this if you are using linear color space (only active in hdrp mode)

## Color Spaces

All flockaroo-effects are initially designed for Gamma-Space. Gamma-space was the default in earlier versions. At first HDRP came up with using HDR-Color space, which is a linear colorspace. So in HDRP and URP versions there's an additional parameter named "HDRP Gamma", which should compensate for washing out contrasts in linear colorspace. However in later versions linear color space is also being used in the Standard render-pipeline. So all versions (std/URP/HDRP) have now an additional parameter "linear2Gamma", which should be enabled as soon as you are using linear color space. As for today the "HDRP Gamma" parameter should be disabled in most cases. It can sometimes give better results e.g. in HDRP, but linear2Gamma should be disabled then. both being enabled won't make much sense in general.

## HDRP (disabled by default)

The hdrp file is disabled by default !!! here's how to use it:

Unity wont compile this effect properly if no hdrp support is present on your version, so in the hdrp ".cs" file in the very first line the `"//#USE_HDRP"` must be uncommmented to make use the hdrp effect.

You also have to add it to the list of effects known to your project:

"Edit/Project Settings... -> HDRP Default Settings -> After Post Process"

..and then add it as an effect volume by clicking "Add Override" and then selecting

"Post-processing/Custom/Flockaroo/..."

from the menu. (in Unity 6000 you dont need that last "Add Override"-step - you will find the effect e.g. in the scene's Settings/Volumes/VolumeDefaultAsset or Assets/Settings/HDRPDefaultResources/DefaultSettinsVolumeProfile.asset in a blank scene)

## URP (disabled by default)

The URP file is disabled by default !!! here's how to use it:

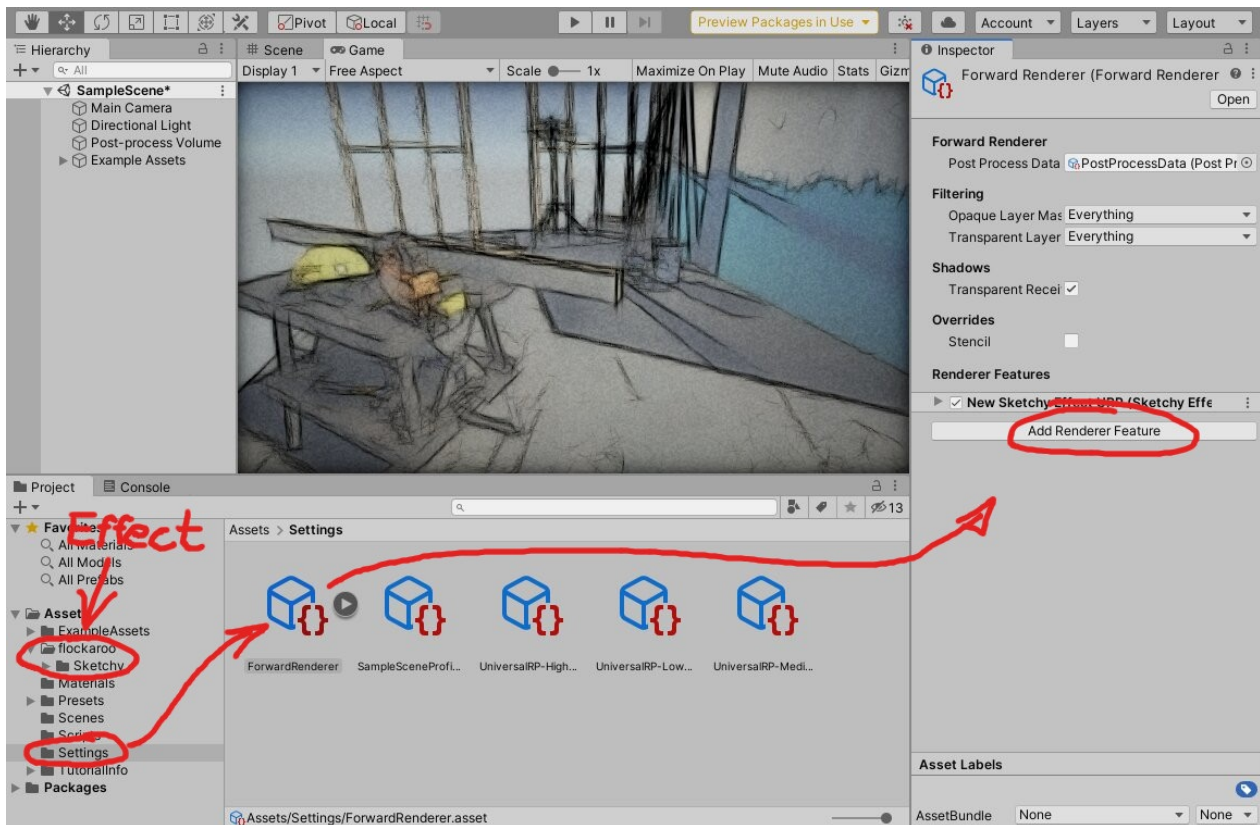
Unity wont compile this effect properly if no URP-support is present on your version, so in the urp "...URP.cs" file in the very first line the `"//#USE_URP"` must be uncommmented to make use the urp effect.

Then under "Assets/Settings/ForwardRenderer" press "Add Renderer Feature" in the Inspector Tab. In newer versions there are several URP Renderers URP Balanced, URP HighDynamic, URP Performant instead of Forward. Beware: This must be the same Renderer as is configured under "ProjectSettings/Quality/Rendering".

For older versions you might also want to comment the line `"#define URP_VERSION_GE_13"` for the effect to work.

It should also run in Unity 6, but rendergraph needs to be disabled by switching to compatibility mode

"Edit/ProjectSettings/Graphics/URP/RenderGraph"



BEWARE!! For now the effect can not be used after Post Processing.  
Furthermore some Post-Processing-Effects like "Bloom" dont work properly. Disable those effects for proper functionality.