Cute Skybox

Introduction

This shader allows you to create a realistic and customizable sky, sun, moon, stars, clouds, and ground environments. It is designed to be easily customizable with various properties to control the appearance of the sky.

Compatibility

This shader is compatible with both the built-in renderer pipeline and the Universal Render Pipeline (URP). This means that you can use it in a variety of projects and with different graphics setups, ensuring maximum compatibility and flexibility. Whether you're working on a small project with limited hardware or a large-scale project with demanding graphics requirements, this shader will provide the tools you need to create the stunning sky and atmospheric effects in your Unity projects.

At this moment skybox shader don’t support Vulkan graphic API on mobile devices.

Get started

1. Import the shader into your Unity project.
2. Create a new material and apply the shader to it.
3. Open lighting settings and apply the material to the “Skybox Material” section or just drag and drop material to the background in the scene view.

With these shaders, you can customize the look of the skybox to fit your needs. Have fun experimenting and creating your own unique skybox style!

Tips:

1. The alpha channel in the skybox can hide the sun, clouds, stars and moon behind it. Use this property to make your skybox even more beautiful.
2. Use horizon offset and cubemap offset for better customization.
3. Use *Sun Height Offset Direction* to make the sun higher than the directional light for better reflection in the water.
4. For Moon position use custom button *Enable moon direction handle*, and don’t forget to disable it after use!
5. You can change *Cloud Move Angle* to show wind direction.

Properties

The following properties are available in the shader.

Cubemap

- Property name: _CUBEMAP
- Type: Float
- Description: A toggle to enable or disable the cubemap feature. If enabled, the cubemap texture will be used to render the sky.

Enable Alpha Cubemap

- Property name: _EnableAlphaCubemap
- Type: Float
- Description: This property is used to enable or disable the alpha cubemap feature. When it's enabled all dynamic objects in the sky rendered behind cubemap alpha channel.

Clouds Over Alpha Cubemap

- Property name: _CloudsOverAlphaCubemap
- Type: Float
- Description: This property specifies that the clouds will be drawn before the cubemap's alpha.

Cubemap Texture

- Property name: _CubemapTexture
- Type: CUBE
- Description: The cubemap texture to be used if the cubemap feature is enabled.

Cube Map Offset

- Property name: _CubeMapOffset
- Type: Range (-1, 1)
- Description: The height offset of cubemap.

Cube Map Rotation

- Property name: _CubeMapRotation
- Type: Range (0, 360)
- Description: The rotation of cubemap in degrees.

Sky Color

- Property name: **_SkyColor**
- Type: **Color**
- Description: The color of the sky.

Sky Power

- Property name: **_SkyPower**
- Type: **Range(0, 1)**
- Description: The power of the sky color.

Horizon Color

- Property name: **_HorizonColor**
- Type: **Color**
- Description: The color of the horizon.

Horizon Offset

- Property name: **_HorizonOffset**
- Type: **Range(-1, 1)**
- Description: The offset of the horizon.

Ground Color

- Property name: **_GroundColor**
- Type: **Color**
- Description: The color of the ground.

Ground Power

- Property name: **_GroundPower**
- Type: **Range(0, 1)**
- Description: The power of the ground color.

Sun

- Property name: _SUN
- Type: Float
- Description: A toggle to enable or disable the sun feature. If enabled, a sun will be rendered in the sky.

Enable Sun Texture

- Property name: _EnableSunTexture
- Type: Float
- Description: A toggle to enable or disable the sun texture. If enabled, the sun texture will be used to render the sun.

Sun Texture

- Property name: _SunTexture
- Type: 2D
- Description: The sun texture to be used if the sun texture feature is enabled.

Sun Texture Rotation

- Property name: _SunTextureRotation
- Type: Range (0, 360)
- Description: The rotation of sun texture in degrees.

Sun Color

- Property name: _SunColor
- Type: Color
- Description: The color of the sun. This property can accept high dynamic range (HDR) values.

Sun Height Offset Direction

- Property name: _SunHeightOffsetDirection
- Type: Range (-1, 1)
- Description: The height offset direction of the sun.

Sun Radius

- Property name: _SunRadius
- Type: Range (0, 1)
- Description: The radius of the sun.

Sun Hardness

- Property name: _SunHardness
- Type: Range (0, 1)
- Description: The hardness of the sun's edge.

Moon

- Property name: _MOON
- Type: Float
- Description: A toggle to enable or disable the moon feature. If enabled, a moon will be rendered in the sky.

Enable Moon Texture

- Property name: _EnableMoonTexture
- Type: Float
- Description: A toggle to enable or disable the moon texture. If enabled, the moon texture will be used to render the moon.

Moon Texture

- Property name: _MoonTexture
- Type: 2D
- Description: The moon texture to be used if the moon texture feature is enabled.

Moon Texture Rotation

- Property name: _MoonTextureRotation
- Type: Range (0, 360)
- Description: The rotation of sun texture in degrees.

Moon Direction

- Property name: _MoonDirection
- Type: Vector3
- Description: The direction of the moon.

Moon Color

- Property name: _MoonColor
- Type: Color
- Description: The color of the moon. This property can accept high dynamic range (HDR) values.

Moon Radius

- Property name: _MoonRadius
- Type: Range (0, 1)
- Description: The radius of the moon.

Moon Hardness

- Property name: _MoonHardness
- Type: Range (0, 1)
- Description: The hardness of the moon's edge.

Stars

- Property name: _STARS
- Type: Float
- Description: A toggle to enable or disable the stars feature. If enabled, stars will be rendered in the sky.

Stars Texture

- Property Name: _StarTexture
- Type: 2D Texture
- Description: This property sets the texture for the stars in the sky. The texture should be a 2D image that will be used to display the stars. Alpha from this texture is used for control density of the star.

Stars Color

- Property Name: _StarColor
- Type: HDR Color
- Description: This property sets the color of the stars in the sky. This color should be an HDR color to allow for more vivid and bright colors.

Stars Size

- Property Name: _StarSize
- Type: Float
- Description: This property sets the size of the stars in the sky. The value should be a number between 0 and 1.

Stars Offset

- Property Name: _StarOffset
- Type: Float
- Description: The height offset of stars.

Stars Density

- Property Name: _StarDensity
- Type: Float
- Description: The "StarDensity" property determines the overall density or concentration of stars in the sky. It works in conjunction with the "_StarTexture" alpha channel, as this channel determines which areas of the sky have more or less stars, with values ranging from 0 to 1. The "StarDensity" property then controls the overall amount of stars visible in those areas, effectively allowing for fine-tuning of the starry sky appearance.

Star Rotation

- Property Name: _StarRotation
- Type: Float
- Description: This property enables or disables the rotation of the stars in the sky. If enabled, the stars will rotate in the sky based on the value set in the _StarRotationSpeed property.

Star Rotation Speed

- Property Name: _StarRotationSpeed
- Type: Float
- Description: This property sets the speed of the star rotation in the sky. The value should be a number between -1 and 1.

Star Blink Speed

- Property Name: _StarBlinkSpeed
- Type: Float
- Description: This property sets the speed of the star blinking in the sky. The value should be a number between 0 and 1.

Star Blink Contrast

- **Property Name:** _StarBlinkContras
- **Type:** Float
- **Description:** This property sets the contrast of the star blinking in the sky. The value should be a number between 0 and 1.

CLOUDSTATE

- Property name: **_CLOUDSTATE**
- Type: **KeywordEnum(OneLayer, TwoLayer, Disable)**
- Description: The state of the clouds. One layer, Two layer, or Disable.

Cloud Color

- Property name: **_CloudColor**
- Type: **Color**
- Description: The color of the clouds. This property can accept high dynamic range (HDR) values.

Cloud Texture1

- Property name: **_CloudTexture1**
- Type: **2D**
- Description: The first texture for the clouds.

Cloud Speed1

- Property name: **_CloudSpeed1**
- Type: **Range(0, 1)**
- Description: The speed of the first cloud layer.

Cloud Scale1

- Property name: **_CloudScale1**
- Type: **Range(0, 1)**
- Description: The scale of the first cloud layer.

Cloud Texture2

- Property name: **_CloudTexture2**
- Type: **2D**
- Description: The second texture for the clouds.

Cloud Speed2

- Property name: **_CloudSpeed2**
- Type: **Range(0, 1)**
- Description: The speed of the second cloud layer.

Cloud Scale2

- Property name: **_CloudScale2**
- Type: **Range(0, 1)**
- Description: The scale of the second cloud layer.

Cloud Horizon Gradient

- Property name: _CloudHorizonGradient
- Type: Float (Range [0, 1])
- Description: This property determines the gradient between the clouds and the horizon. The value sets the intensity of the gradient from 0 to 1, where 1 is full intensity and 0 is no gradient.

Cloud Horizon Offset

- Property name: _CloudHorizonOffset
- Type: Float (Range [0, 1])
- Description: This property determines the offset of the clouds relative to the horizon. The value sets the offset intensity from 0 to 1, where 1 is full offset and 0 is no offset.

Cloud Move Angle

- Property name: _CloudMoveAngle
- Type: Float (Range [0, 360])
- Description: This property determines the angle at which the clouds will move. The value sets the angle in degrees, with 0 degrees being straight up and 360 degrees being a complete rotation.