**Description:**

Underwater Effect is an underwater environment pack to create underwater scenes seamlessly. Package includes various customizable variables as below;

**Features:**

- Underwater script for one-click customization of underwater scene variables like Environment / Sky Fog, Fog Color and Density.
- Effects script for customizing the Underwater Depth density and Color Input.
- Underwater shaders for customizing Reflection / Water / BumpMap slots, Water Color Input, Wave Distortion, Specular / Gloss Settings, Opacity, Reflection Strength etc.
- Caustic shader / script for customizing Caustic Speed, Caustic Textures, Caustic Color Input, Opacity, Caustic Tile Size etc.
- 6 sets of caustic textures consisting of 32 frame each in 256 / 512 pixel sizes.
- 4 terrain textures with one default and one modified terrain plane.
- 4 water textures.
- Underwater fixtures and plant.

**How it works:**

Look for folder “Prefabs to USE” and simply drag and drop prefabs from folder named “Main” folder consisting of basic underwater scene elements and “Optional” folder consisting of optional underwater objects to add to the scene.

Example scenes can also be used to build scene from scratch.

**Building Scene from scratch:**

Assuming you already have a terrain and direction light in place for the scene, follow below steps to create the underwater environment;

***Step 1 - Creating Caustics*** – Create an empty game object and rename it caustics. Add the projector component from unity’s default ‘Component/Effects’ menu.

Attach the AnimatedProjector.cs script, wherein caustic FPS (Frames per second) can be altered for changing speed of caustics (By default value is kept as “20”). Drag and drop the any set of caustic textures to ‘Frames’ variable. If the textures appear in random order, simply click on the script menu settings and select ‘Sort Frames by Name’ value and the textures will appear in order.

Now create a new material under “Resources” folder and rename it as caustic material. Select Caustics shader from UnderWater shaders and add this material to the caustic game object.

***Step 2 – Creating Depth Effect*** – Import “Character Controller” Package from unity’s standard assets into your project. Drag and drop “First Person Controller(FPC)” prefab into your scene. Under FPC hierarchy rename Camera as Main Camera and attach Effects.cs script to the Main Camera.

Create an empty material under “Resources” folder and rename it as effect material. Select Effects shader from Underwater shaders. Drag and drop this material to ‘Effect’ slot in the Effects.cs script. With this you can customize the Depth effects, Depth Color Input etc.

***Step 3 – Creating water*** – Create another empty game object and rename it as water plane. Add mesh filter and mesh renderer to it from unity’s default ‘Component/Mesh’ menu. Select plane mesh from mesh filter to create water plane and scale it to the appropriate size to cover your terrain (default value is 150:XYZ).

Attach the Underwater.cs script to this game object. This is the main script to control the behavior of various variables of the underwater scene. Also you need to attach Caustic game object which we created above, to this script (Drag and drop the game object to the ‘Add Caustic’ slot).

Attach the WaterSurfaceClone.js script to this game object.

Create a new material under “Resources” folder and rename it as water material. Select UnderWater shader (Advance or simple) from Underwater shaders. Select the appropriate texture / bumpmap texture and change the various other variables of the shader to obtain the desired result.

Your Underwater environment is ready!!!

**Known issues:**

While appropriate versions have been uploaded, in few Unity 4x versions under underwater.cs script, SetActiveRecursively appears to be depreciated function, which should be changed to SetActive for removal of error message.