Carrara Environ Construction Kit: Woodlands

Welcome to the Woodlands!
The aim of this kit is to make for a fun experience in creating woodland scenes by using but a few carefully designed preset pieces along with a preset base that already contains a Carrara atmosphere and sky, clouds and fog, and a full-blown lighting system – each of which can be used or hidden to get what you want for your render. I have included several presets for several reasons. First, I wanted this set to include plenty of examples to help illustrate what can be done at some, small level, using nothing but what the kit contains. In this, the presets also help to show differences in render times when using more or less of the base features. Second, I wanted the set to be useful for quick load and use functionality. To that end, you don't ever have to design your own scenes – simply use the presets. Third, I want to help newcomers to Carrara to see some of the many different styles of scenes that can be made using nothing more than what Carrara can give you – straight out of the box, so to speak. That all being said, let's have a look inside the Woodlands Construction Kit:

Finding the Presets

For this series, I intend to use the browser headings already included with the Native Content pack that comes with Carrara.
To that end, you'll find the various presets in the following locations:

Scene Presets – There are three types of Scene Preset in this kit and can be found in the "**Landscapes**" heading of Carrara's Scene Tab, under "**Dartanbeck**".

The **Realistic Sky** heading within is the actual base of the product and uses Carrara's Realistic Sky and a Sun Light to help you to easily control the lighting of the scene according to where you position the sun in the sky. This is perhaps the easiest and quickest method to get the lighting of your scene set up according to time of day needs. Some of the presets are identical in scene layout, but use different features or have different lighting.
The **Background Map** heading uses background maps created using the scenes within the Realistic Sky heading.
Inside the Background Map heading is the **Animated** heading, which actually uses a Backdrop rather than the background, and has only a single preset.

For more information on the scene presets, see below.

Object Presets – There are three types of Object Preset in this kit and can be found in the following three locations within Carrara's Object Tab:
Nature > Dartanbeck contains the three unique Woodlands blocks which are designed to enable us to quickly and easily create woodlands settings with point and click simplicity, while providing the beautiful results seen in the promo images.
Basic Plants > Dartanbeck contains a good selection of new plant presets designed for woodland environments for you to use.
Leaves > Dartanbeck contains two versions of the berries used for the Wild Crabapple plant type under basic plants.

For more information on the scene presets, see below.

Shader Presets – There are five shader presets included. Three for terrain, and two for water. They can be found in the Shaders Tab under **Terrain > Dartanbeck**

For more information on the scene presets, see below.

Scene Presets – Realistic Sky

Base Scene
There are three base scenes which for a great place from which to start creating your own scenes of any kind, but have been specifically developed for this Woodlands Kit. Each are identical except for the time of day, and that “Base – Sunrise” uses Film Camera 2 as the default camera to simulate that it is facing the opposite direction.

These base scenes contain all of the environmental controls found in each of the thirty presets in this, Realistic Sky heading, which is meant to help provide a good understanding of various ways to control lighting and effects within Carrara scenes. Any (or even all) of these controls or effects can easily be replaced by other methods, should you choose to do so. You will also notice that there is information included directly inside the instances tab. Any instance that begins with “►►►” is an information drop-down for convenience. When the time comes that these are no longer useful, simply save the file after deleting these out of your way.

Focus Group
This group has nothing in it by default with the exception of a lighting rig that only affects what is placed within the group. This is an easy way to add highlighting and focus lighting to objects of interest – like your character or beasts. To use this feature, simply drag any number of instances into the Focus Group. All preset Scenes come with this group and the lighting within has been set up according to the default lighting of that particular preset. For example, the sunset presets have been set up differently than the mid day presets.

Environmental Controls

Cameras – This group contains the default cameras which includes a pair of Filming Cameras, a pair of Scene Set-up Cameras, a Spherical Camera, and a 'Zero Coordinates Target Helper' – which isn't a camera at all, but rather an invaluable camera positioning aid.

Film Camera 1 – By default all presets except for Base – Sunrise use Film Camera 1 as the default render camera.

Film Camera 2 – This camera looks toward the center of the scene from nearly the opposite direction as Film Camera 1, and is only used by default in Base – Sunrise, located in the Realistic Sky presets.

Cloud Dome and **Outer Setup** – Both are provided to have a quick camera choice for looking at the scene from outside it's perimeter for ease in dealing with distant objects, the Cloud Domes and viewing the Light Dome setup, etc., which is invaluable when building detailed outdoor scenes.

Spherical – A preset spherical camera for those times when you've build the perfect scene for use as a 360 degree background image for use in the 'Background' scene setting of Carrara.

Artificial Global Illumination – This group contains a sunlight and two light rigs for use in artificial global illumination. Although the sunlight is part of Carrara's Global Illumination system, it's default settings are setup for use with the light dome, so I placed it in this group, too.

Sunlight – This light works as Carrara's representation of the sun within it's realistic sky atmospheric scene effect. There are two ways (that I am currently aware) to aim this light. The x,y,z coordinates make no difference. So moving the light model from side to side, or up and down will do nothing to change the placement or effect of this light type. So feel free to place it where it is most convenient for you. It is common to leave it within sight of the film camera or just above it, and uncheck “Show Object in 3d View” after your done aiming it.
To aim a Sunlight either edit the realistic sky (select “Scene” and scroll to Atmosphere) and maneuver the sun icon within the sky dome, or rotate the light model itself within the scene. It should be noted that if you have the light shown in 3d view, then you'll see a white sun icon outline in the workspace if the sun's disc is in the view of the current camera. This works well if you wish to “see” the sun in your render. I started this set with one of my favorite lens flare settings applied, but found that using a lens flare is not an ideal default preset. If you're interested in knowing what it was, I use the “glint” preset lens flare, and change the blue part of the perimeter of the color settings to various ranges of orange. This provides a very subtle effect, so I'll often crank the intensity up by varying amounts to get the look I want. But I also suggest that you try all of the lens flare presets when you have the time.

Artificial GI Distant Light – This light model is grayed out because I have unchecked the “Show Object in 3d View” box by default. This light is replicated over the Global Light Replication Dome eighty-eight times. It is set at a brightness of 1. This is simply to provide a low-level even distribution of shadow casting ambient light. The principal behind the dome of lights is to mimic, to a customizable degree, the effects of global illumination. The higher the number of lights, the lower the need to apply 'soft shadows' in the light's Effects tab. Using soft shadows on a single light in the scene adds significantly to the render time of the scene. As the sun light is only one, directional and high intensity light it makes sense to use soft shadows on it. By default I've made this shadow very subtle by using 300' as the soft shadow light radius. I will often increase beyond that, for my own use, yet most of my Carrara friends prefer using settings under 50'. Use this 'Light Radius' setting in the Soft Shadows to define how sharp the line is between where there is shadow and where there is none. Raise the number to soften, lower to sharpen. Setting this really high can make the shadows dissolve entirely, depending upon what makes the shadow. A really sharp shadow might make a distant twig form a detailed shadow upon the grass – something you'd never see in our, natural world. As the director, it is your eye that you should aim to please, however, regardless of real-world behavior.

Ambiance Direction Control – This is used to aim the ambient light rig that is parented to it. Note that, although this is actually a light model, it is set to affect nothing except the text that accompanies it. It is used due to its directional shape, only. In many cases, you'll likely leave it just where it is. Sometimes, however, you may have a specific need to have the ground's reflected light more predominant from a very specific direction. That's where using this comes into play.

What does it control? Glad you've asked! Parented to this model is a set of nine lights. These lights cast no shadows and are infinite. They are divided into three groups according to the direction they face. The lights are grayed out since they are set to not appear in 3d view. Each group contains Cool, Warm, and Neutral, which indicates their color.
Cool = Low Saturation Blue. Warm = Low Saturation Orange. Neutral = Medium intensity No Color.

High – Lights in this group are set to brightness 15 and face upwards towards the direction indicated by the directional control.

Medium - Lights in this group are set to brightness 5 and face up in a direction complimentary to the High group.

Low - Lights in this group are set to brightness 3 and face up in a direction complimentary to the High group, opposite Medium.

This Ambient Light rig is used in addition to the scene Ambient setting, which is set at “sky” at a brightness value of 10%. It is set up this way in an attempt to remove starkness from shadows, as well as to mimic the translucency of real world materials – like the leaves on trees, in this example. If you would like to increase the contrast of your shadows using this kit, try decreasing the scene's Ambient brightness to 0% first. This will leave the ambient light rig working toward creating your false translucency. Remember that I have set the Sun Light to have very soft shadows too. A lower number in the soft shadows light radius on the sun light will also tighten up the edge of the shadows for a more stark, crisp edge. Turn of the soft shadows altogether on the sun light and you'll get a nice, crisp line between what is in shadow and what is not.

This Ambient Light Rig can also be useful for creating less than natural effects to your scene as well. By default in the provided scene presets, each group will make use of only one light. Feel free to experiment with the settings for various effects. Keep in mind that lights can be fully animated -0 as with nearly anything else in Carrara. For a quick example, I could set up a scene with the sun light low in the sky for a darker blue, or even darker sky and build a campfire in the scene. I could use this rig to cast orange, red and yellow lights upwards at everything in the scene – flickering differently for each of the colors. I could also animate the colors to change, too. Tip: For an easy, non-uniform animation like this, we can do so with as little as two settings for each animated light. Set the start frame to be one thing and the end frame to be another setting. In the Sequencer, set the tweener to Noise or Oscillate or Formula, for example. Trying things like this can be very rewarding. If you get an effect that you like, find a place in the browser where you'd like to find it again and drag that whole light rig into the browser for use in any other scene.

Clouds – This group is made up of a single cloud set up which has then been duplicated once to show what can be done with that simple method. The initial set up uses only one, large volumetric cloud, positioned straight down, almost below the central terrain – at just the right height to form a light fog in this central part of the scene, working in conjunction with the fog settings in the realistic sky editor. Upon duplicating this initial set up, I lowered the duplicated cloud further, and out of the cameras view. For ease of use, I left it high enough to easily find the translation tool directional arrows to pull it back up and into a new position. Before we get too far into how to make changes, let's go over how the default system works.

To turn on ground fog from this rig, simply make the Clouds groups visible. (select “Clouds (Make this visible for ground fog)” and then check the box at the top where it says: “Visible”)
I named the replicators in such a way that you can choose to make visible only the clouds for Film Camera 1 or 2 or both. This will make visible all of the clouds created via that replicator.

Partial Cloud Dome – This is a vertex model of a slice taken out of the upper half of the shell of a sphere. Additionally I've created several useful morphs onto the object that give you ease in making the replication area larger or smaller, in height, width or both as well as two morphs called “Storm Clouds 1 and 2”. These morphs are made to provide a lot of flexibility in how the clouds appear in the scene in a multitude of ways – but can also be used on their own for replicating other things as well. I'll go over but a fraction of what this thing can do and let you take it from there.

To the clouds that have already been replicated, the morphs will expand or contract only their positioning within where the surface replicator has already placed them. This is incredible for creating clouds more or less densely populated in a defined area. For an example of the difference, allow me to explain the other way:

Surface replicating clouds after using the morphs will change, entirely where the surface replicator places the clouds – since the surface has changed. So, if you want a lot more clouds, run the surface replicator again, after expanding the dome. Then, after replicating, use the morphs to shrink back down, and reshape the dome.

Storm clouds morphs are designed to help place the clouds lower and more abundantly near the horizon and can be mix and matched to animate the clouds in a threatening storm-like manner, for example. Tip: While setting shapes and sizes of the domes, it can be useful to make them visible, temporarily, during set up.

Woodlands Terrain Base

Also found in all realistic sky presets is the default terrain base. But not all presets use it's default settings.
Open the group to reveal three terrains. Primary Terrain (Texture Mapped) is set up to do so, as are the other two, but the basic default uses a procedural shader – the same shader for each of the three terrains. As evidence of a Shader category with this kit would indicate, Woodlands comes with three terrain shaders to choose from. They can all work together in the same scene – although most scenes tend to look more natural if the same shader is used on each of the terrains used – and that includes those from the terrain used in the Object Woodlands Blocks as well.

The second terrain is not used (visible) in any of the provided presets – but is included for yet another option for you to explore. The Primary terrain is set up to be the central point of interest area for your scene. By design, Woodlands is not intended to be the point of interest, but the setting into which you place your points of interest. However, during it's creation and many tests, I have been growing rather fond of using the set as it's own picture!
In the image on the previous page, you can see some distant terrain where the water would otherwise meet the sky. That is Background Terrain (Distant). Since I was planning this set to be mostly a quick means of loading a Carrara 360 degree environmental background, I left that distant terrain for all included presets. Background Terrain (Close) is more ideally suited for adding castles to, or replicate more trees, or...
To that end, the Background terrains can easily use any of the shaders while the Primary Terrain uses a different one. But when the Woodlands Blocks Objects differ from the Primary, it is more noticeable – but not necessarily bad. It depends upon what's going on in the scene – and what the scene is, etc.,

Within the Primary Terrain is “Replicated Water”. Unless changing the shader or the animation aspects, etc., you won't need to touch the Ocean that lies within the replicated water, since it is buried deep below the camera's view. To elevate or lower the water level, adjust the position of the replicator instead. This is not a surface replicator. To make the water plane a different size simply open the replicator (double-click) and change the number of replications.
There is also an infinite water plane to represent the continuation of the water beyond the replicated water, to infinity. Woodlands also includes a second water shader (Water – Background Quality) which is identical to the other with the exception of having no transparency – which is truly a huge difference, but is great for scenes where the water is not part of the focal point of the shot – which can be often – and not using transparency (just reflection, instead) can be a big savior of time, depending upon the scene.

Another option could be to turn off the animation of the Ocean (uncheck “follow the wind”) and change the shader to dirt to simulate a path where the stream is.

Woodlands Blocks (Object Presets)

Three Woodlands Blocks are included ranging in size Small, Medium, and Large in order from left to right. Each block has a good woodlands feel according to the natural environment in which I live, and have done so my entire life. They begin with a specially designed terrain object and come with a compliment of woodland plant life. The smallest one, Evergreen Grove Block, does not use replicators, and should not be confused with the idea that it only includes evergreens. It uses enough evergreens to deserve a clever name that would place it to the left. I have created two forms of deadwood for this set. Both standing (Lifeless Tree/Shrub) and laying down (Deadwood) which really help to sell the natural order of things out here, in the wilds.

By design, I meant for the Forest Block (medium sized block) to be the main piece, the Large Woodland Block to be in the background, and use the Evergreen Grove Block to fill in here and there. Contrary to that initial plan, each works well in any of those roles. The Large Woodland Block is quite large, compared to the others, but not compared to some of the hills and mountains in Carrara. I have found it really useful as being an instant population of trees, bringing it right up close. The fast elevation completely hides the sky from the background putting the camera fully into wooded territory. All three have also proven useful on their own, after deleting all of their plants. They truly have been a time saver for me.

The way I use the blocks is to start with one of the Base scenes and bring them in one at a time, starting with what I feel would work best for my current vision of what I want my scene to be. I made the Evergreen Grove Block terrain a lot taller than it needs to be – so that it can more easily be replicated (without the bottom edge showing) and can be lifted and lowered, creating the sort of uneven ground that you'll find in many woodland environments.

Once you have brought in one block, you don't need to bring in another of the same type. Instead simply duplicate the one you have. The shortcut is Cntrl D on Windows, Cmd D on Mac or you can go Edit > Duplicate.

Basic Plants

I made these plants to render quickly and to take up their space in the background. The one exception being the “Specimen Maple”, who has texture mapped bark and translucent leaves, and is built with higher resolution and detail. The less scaled and low density of the other plants really works to an advantage to creating the naturalized woodland feel. I enjoy loading in some of these individual plants to place around where they're not included via the blocks. Alternatively, I'll sometimes just duplicate trees that I have already brought in with one of the blocks. I have also included presets that are accessible via the Plant Editor's Load feature. Then you can shape and tweak them, change them entirely!

Scene Presets – Background Maps

While you'll still see many of the common elements included in the Realistic Sky Base presets, these all use renders from those in their scene's Background option as a Map. Another difference is that they use a Distant light in place of the sun light. No atmosphere settings are recommended for these – as the map replaces the realistic sky system. Don't let that stop you from experimenting on your own, though! But heed my advice above beforehand.

You'll still get the same great ground fog and clouds, etc., and using these scenes can be nearly identical. The biggest difference will be that rendering only a background map in a scene takes very little time – but you lose the advantage of being able to change or animate the background details. In this bunch of presets you'll see a base scene that uses a simple ground plane with a texture to give your subjects something to stand upon and one that uses the same base terrain as found in the Realistic Sky presets. The next four to the right, as with the final two, are preset example scenes followed by four that rely on using a shadow catcher. This helps to better illustrate the advantages and disadvantages of using maps for your background instead of a fully realized scene, as well as whether or not to make use of a shadow catcher – or simply build a base floor.

Volumetric Clouds – It should be noted that volumetric clouds can add significantly to your render times. Many of us feel that they are well worth their wait. To that end, it is most fortuitous to turn the clouds visibility off while setting up and test rendering, and activating them again for final rendering needs.

Scene Presets – Background Maps - Animated

This preset is what remains of the scene used to create the backdrop it uses. I like to use this technique as it is easy to keep the camera movement the same as used in the backdrop. So this scene utilizes yet another great feature of Carrara – using Backdrop images. Instead of being wrapped all the way around the scene, backdrop images are used to fill the backdrop of what your camera sees. Like a background image, anything placed in front of this renders in front of it.

For this preset, I set my render resolution at 1280 x 720. This is my final animation resolution, so it is important that my backdrop uses that size. I set the master tree models to simulate being affected by a fairly strong wind and put the clouds in motion – then rendered the animation. The camera is following a deleted character that used a straight forward walk cycle. I then used Project Dogwaffle: Howler 8.2 to create the animated lightning and image brightness effects during lightning hits. I brought the result back into Carrara as a backdrop animation and added more clouds. Back to Howler and added rain (AnyFX Plugin by Pixelan). And now we have a backdrop animation of a rain storm with pretty intense lightning to have our characters walk through.

Closing message

So that gives a brief detail about what you have by installing this kit. I feel that the presets are nice enough to use all by themselves without the need to read any of this – which was my intention. But for those who really want to dig in the dirt and scape out your own, woodlands scenes, I want to make the process not just simple, but fun and unique – without plaguing your computer with days-long render times. Such long renders can easily be achieved using this kit, don't get me wrong! But you really shouldn't have to. Use the eye of your render camera to determine whether to add another block or just duplicate one more tree. Drag 'em around and up and down. Rotating a duplicated instance will give you a whole new block. Even the slightest change - especially if you sink one deeper than the other. Any tree or shrub that is used in any of the blocks can be duplicated for adding another instance, or copied and pasted as a separate model to become tweaked in the model room. Due to the already low resource levels of most of these presets, you'll find a lot of room to work with – without bogging down your system's precious memory.

I am a shopper at Daz3d – Big time! This is one of the biggest reasons to why I left the center point of the scene empty. This is an area that I consider to be the focal area. I consider this because any time you drop something into the scene by using the insert command or by dragging something into the scene tab, it's default location is 0x, 0y, and 0z in 3d space – as far as Carrara is concerned. So if you want to insert a Target Helper Object, for example, so that you can select it for rotating your camera around, in this kit's presets, that's the focal area... 0,0,0. I try to make all of my scene creations that way – simply to save myself time. So now, when I buy my new thing from Daz3d, I can simply drag it into the scene and render it.

Some items I buy are not for the main focus, but should be within that area. So now I can bring it in, rotate it, and move it into position, according to where I need it in my camera. The Base Primary terrain accommodates everything I've tried so far.

The other huge reason is that I love the use of aniBlocks and other, purchased animated pose files to help save some time. Having such a flat terrain space in the center gives several seconds of walking, jumping, playing football or soccer, martial arts moves and fighting scenes – or maybe the character is frustrated and just having a bad day. The terrain accommodates, but also the shaders for the terrain help as well. With such shaders, you can group you animated character (Cntrl G / Cmd G) and 'sink' it down a bit, into the terrain shader to simulate their feet sinking into the grass or the leaves. I have a large collection of aniBlocks and all that I have tried in here work great.

What I really wanted was to help to show Carrara users a good assortment of techniques that I can use, simply by owning Carrara and nothing else. The one preset required me to use Project Dogwaffle: Howler, which is also available at Daz3d, but everything else just uses Carrara's useful ability to provide everything that you need to create and animate wonderful scenes – and get them rendered quickly. If you aim to do animation work, I must say now that Howler's ability to load and edit animated files of all types that Carrara can output, with exception to Quicktime Movies, makes it an very welcome addition to the tool kit. Many of the image-enhancing post work filters used popularly in this field are available for animations in Howler – as with an enormous selection of other techniques.

I have avoided using Carrara's Global Illumination feature for a long time, thinking that it was a real time killer. It can take long times to calculate lighting simulations in a good many scenes, but so can adding too many lights. Replicators can save you a lot of time in the scene creation process but can slow your render times with their calculations as well. Sometimes it can be better to simply duplicate objects and place them by hand. In all, Carrara is capable of allowing the artist to use many methods to achieve a similar goal – which makes it incredibly versatile.

The Realistic Skies that I've included in this kit are nothing more than a near default setup, with some special consideration spent on the fog effect. I did not intend this kit to be a Realistic Sky preset product, since there are such good products for that already. I have used some of the presets from all of the Carrara Sky products that I own – and, as expected, they all work great to enhance the scene in addition to the presets I've provided. If you have sky domes or other background maps that you like to use, this kit can work beautifully in that way as well.

In the case of using sky domes from other products, I can provide this tip: I like to set my light dome light and sun light to ignore the sky dome – as these types of lights will be lighting the dome from the outside of it. To set the sky dome brightness, I copy the texture map of the color channel from the dome's shader, to the glow channel and use the brightness slider for that image to determine the brightness of the dome. I usually start at a brightness of 25% and work from there.

Just because I really like a certain feature, like the Realistic Sky, doesn't mean that I use it for everything. Carrara is the most unique software I've ever tried – in how many different methods it allows us to use – since it can load nearly anything made for Poser Software.

Lastly, I just want to wish you the enjoyment of success in all of your Carrara endeavors. I strive to make it as understandable and fun for everyone and any types of methods you'd like to try. If you have questions, I do my best to frequent the Carrara Discussion forum at Daz3d.com and am happy to assist whenever I can.

Happy rendering, my friend!
Dartanbeck