



Cruising the Canyon

A guide to Bryce and the art it bears.

Disclaimer

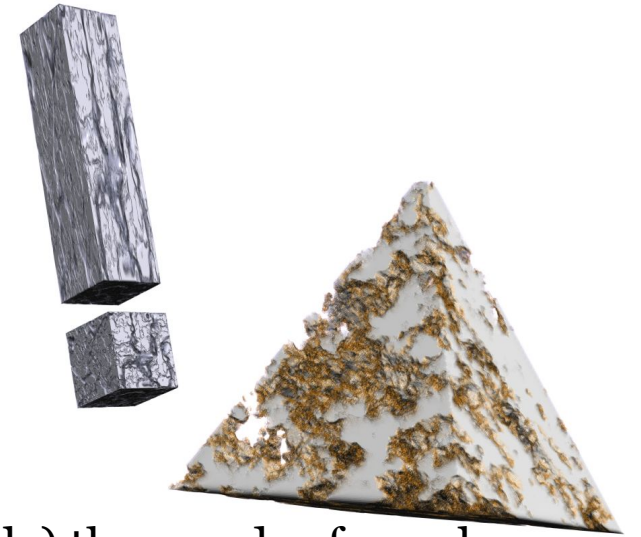
I know, I know, Nobody asked, but hear me out, because this is important for the whole documentation.

I AM NOT AND DO NO CLAIM TO BE A PROFESSIONAL!!!

I'm not this guru of Bryce, I'm not the Einstein of old computer art. There are (most likely) thousands of people better at using Bryce than me, and there are (definitely) millions of people better at 3D editing than me.

However, I **do** claim to know about most, if not all, of the things I mention in this guide of Bryce... well, of course I do, or else I wouldn't have written it.

I am simply writing this from the passion I have for Bryce. Thank you, and please keep reading!



Segment Overview

The beauty of Bryce

This segment is the most personal of the three.

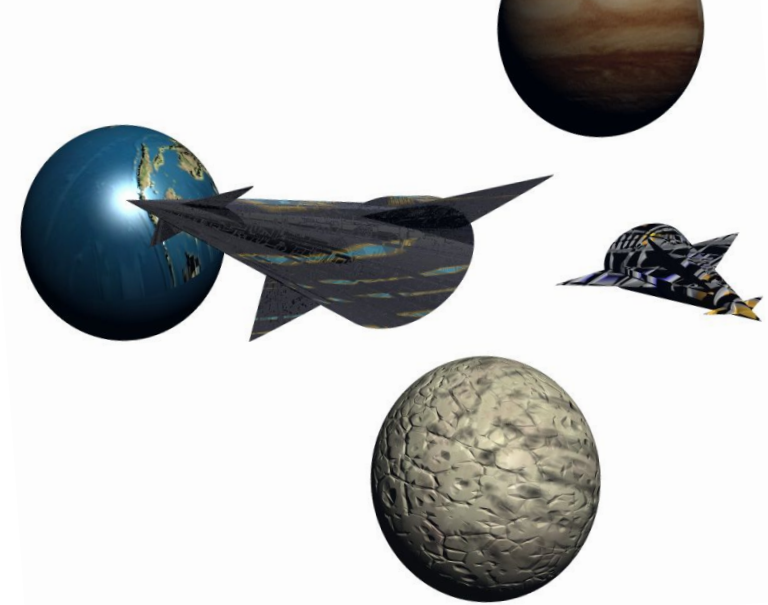
It acts as an introduction to Bryce just in case you don't know what it is.

The practicality of Bryce

This segment goes into most features you'll find in Bryce 7. Most of the features in Bryce 3 are in Bryce 7, but the features that are exclusive to one version are mentioned as such.

The theory of Bryce

This segment focuses mainly on the art produced by Bryce. It also contains some of the techniques for Bryce.



A tropical sunset scene with two palm trees on a small island. The sun is low on the horizon, casting a warm orange and yellow glow across the sky and water. The palm trees are silhouetted against the bright sky. The water is dark with some ripples.

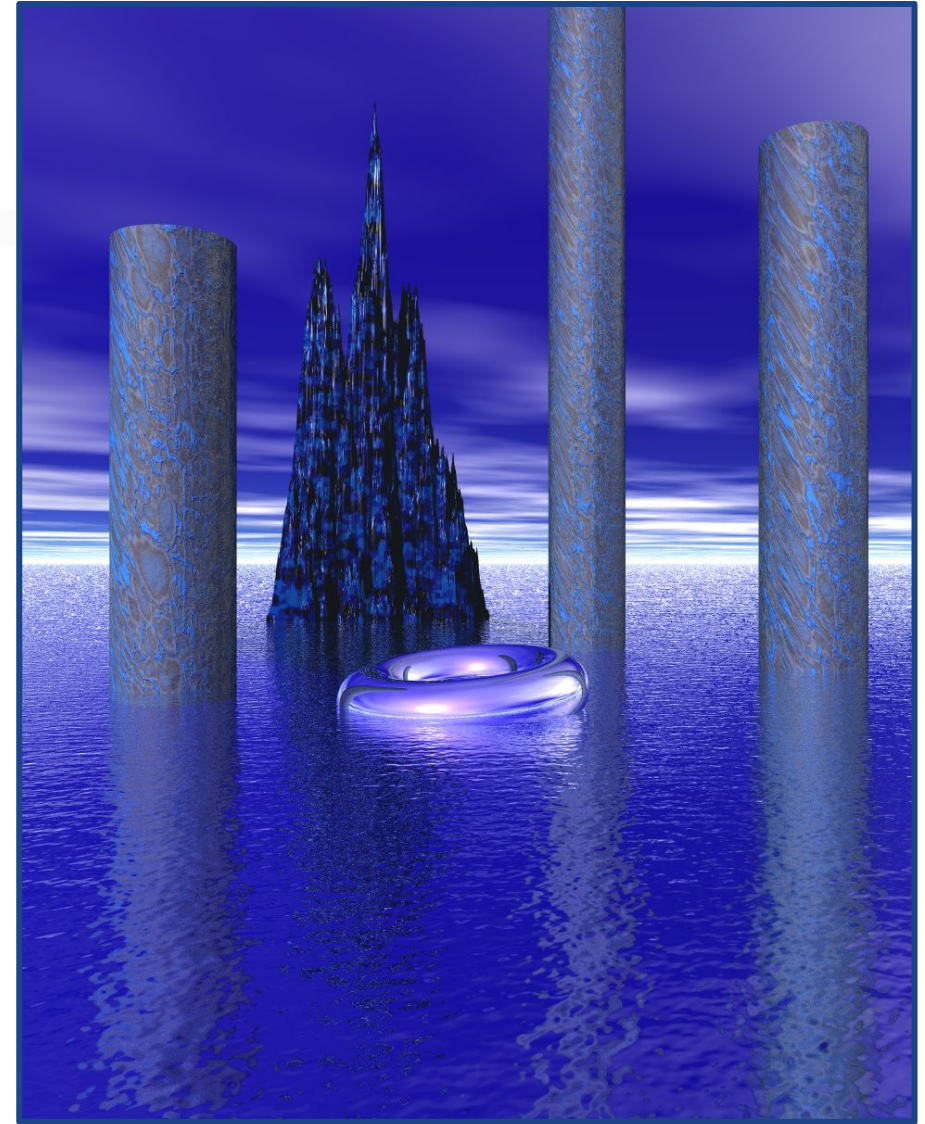
Segment 1

The beauty of Bryce

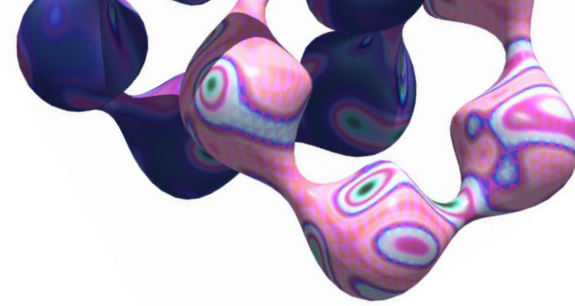
Beginning

Imagine this. An infinite azure, an oasis of nothingness, a void filled with water. Then, a torus, resting in the water, covered in chrome with a blinding shine. Then, towering stone pillars covered in blue moss raise out of the water, looking down on the poor, cowering torus. Suddenly, the sky changes mood, becoming a much harsher blue, painting the water in its image. Finally, as the scene moves around, a mountain made of lapis lazuli makes its presence known, and firmly finishes your scene.

Chances are, you just thought of an image like the one on the right. While it isn't the most flattering sight, it captures a sort of essence of an age passed on. The scene was made with older technology. If it was made with newer technology, it might have looked fancier, but that retro charm would've disappeared.



The Essence



That's it! That's the beauty of Bryce! That retro aesthetic, not too bad to be a pain to the eyes, but not good enough to disallow disarray in a scene by considering it “out of place” or “random.” If you have Bryce, try making the scene I've just described. Once you've rendered it, try remaking that same scene in Blender, 3D Studio Max, Cinema 4D, or any other modern 3D modeling software. Don't hold back on making it look as realistic as possible!

Now compare the scenes. The Bryce style of rendering can support all of the wackiness happening in the scene. A chrome torus? Massive pillars of blue moss? A mountain of lapis? These have very little to do with each other (apart from colour), but Bryce manages to make them work together. This Bryce render isn't the best, but the modern render will look significantly worse. This is because there are only a few ways to emulate the Bryce style:

- Purposely jeopardise the render to make it look older. This *can* be done well, but it's arguably easier to use older software than to emulate an old look with newer software. Still, exceptions exist.
- Render it as you would. This destroys the perfect balance mentioned at the start of the page. It looks too good to make the random elements fit, which makes the object clash heavily with the style. By consequence, it also ends up looking too bad to properly enjoy.

The Limits

There isn't really a limit. Of course, anything can be made. It's a 3D graphics software, of course your abilities are the limit. However, how much is too much?

Well, there is both a theoretical, as well as a practical, answer to this question.

Theoretically: there also isn't a limit. At one point, your "scene" will become a cornucopia of random shapes with random textures, but this can still be made somewhat appealing. If you can mess something up, you can also do it right.

Practically: Bryce, unless run on some sort of Nasa computer, will run sluggish if there is a lot of objects being rendered. Sometimes, just having a few objects being reflected a lot, or more complex geometry (Like a negative mountain, more on that in Segment 2) will make Bryce run significantly slower. If you have a lot of objects, your scene will render for hours or days, and if you plan to animate your scene, then multiply the render time by the amount of frames. Bryce takes no shortcuts in rendering, and it will do a full render for each frame of an animation.



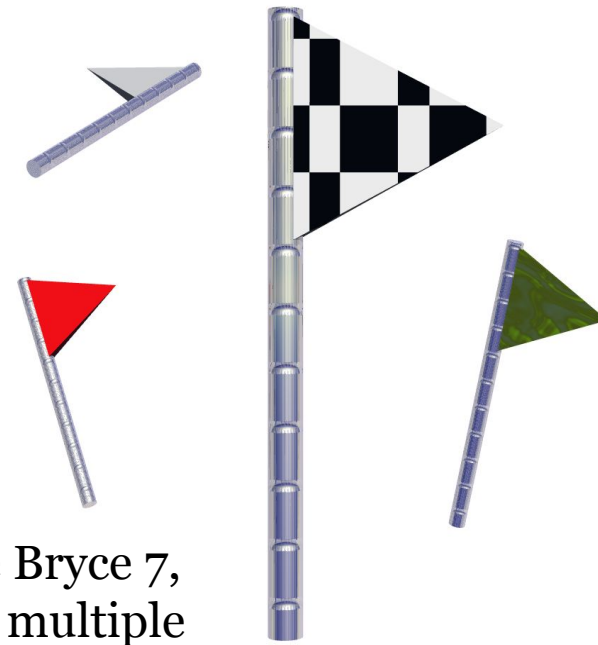
Where to Begin

So you've seen the beauty of Bryce and want to make your own. Where to start? Well, first you'll need a copy of Bryce. This guide covers the two versions of Bryce that I'm most familiar with, Being Bryce 3 and 7.

If you want to try Bryce 3, then hang on tight, because there is a full process required. Unlike Bryce 7, Bryce 3 was made for old technology, or at least technology older than Windows 10. As such, multiple extra things are needed, like a virtual machine (yes, really, a virtual machine). **Note that a Windows virtual machine is also required to run Bryce 7 on Mac, as Bryce 7 is not Mac OS compatible.**

As for Bryce 7, you'll have to buy it. It's around \$20 depending on where you live.

Of course, there is another, less moral way of getting Bryce 7, which would be to find a version online for free. I'm sure there is a version out there that someone has uploaded for free. But don't feel *too* bad about using it, because Bryce 7 used to have a 100% discount, and was bundled up with a bunch of other DAZ3D products that had the same discount. This discount is now discontinued, and Bryce 7 was replaced with "Bryce 7 Pro."





Segment 2

The practicality of Bryce

Bryce the Third

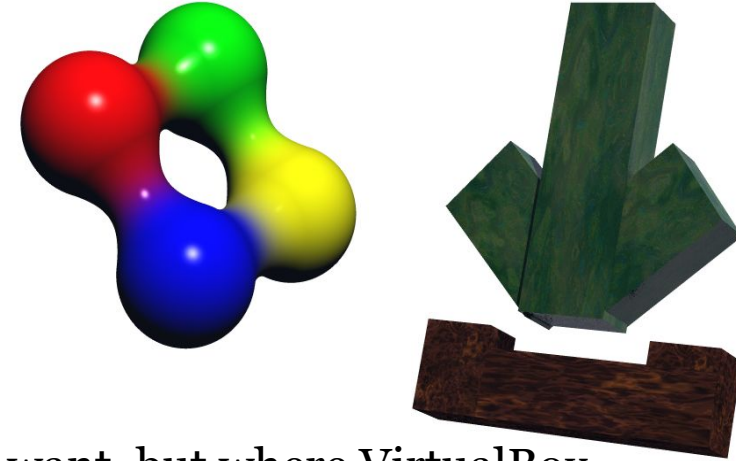
If you are up to spending money for Bryce 7, I would highly advise you do. Unless you plan to use Bryce 3 on proper hardware with no virtual machines, the program is near unusable. I won't go into too much detail yet, but rotating in general, animating, the camera in general, and exporting your creations just becomes miserable. Maybe with the proper hardware, Bryce 3 is much more enjoyable, but I was glad to start using Bryce 7. Bryce 3 is still great, just rather limiting.



However, if you do want to use Bryce 3, there's a very specific way to get it (or at least how I got it). This involves using a virtual machine to run the Bryce CD-ROM, considering that the setup doesn't run on Windows 10. For this method, you'll need:

- Bryce 3D for Windows 95/NT and Power Macintosh, found on Archive.org. Keep the Archive.org site open, because it contains the Serial Number.
- Virtualbox Virtual Machine
- Windows XP ISO file (Don't be fooled! Despite saying "Windows 95," the installer works on XP)

Getting Bryce 3



Firstly, you'll want to install Virtualbox, and go through that whole process.

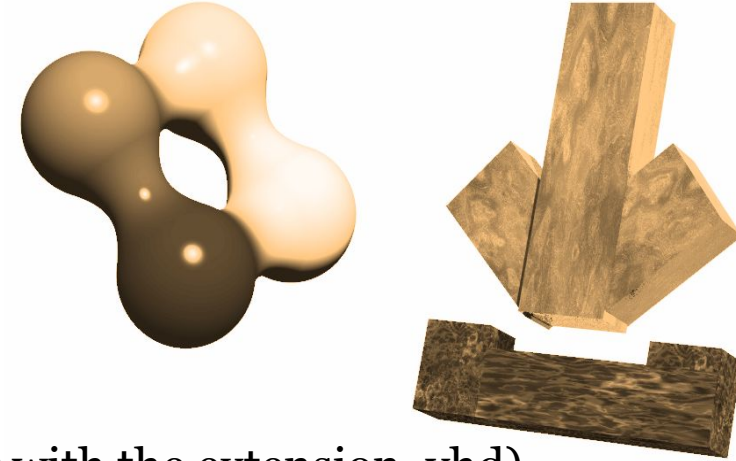
Once Virtualbox is installed, make a new virtual machine. You can call it whatever you want, but where VirtualBox asks for a file, open the Windows XP ISO file.

Once the virtual machine is made, open it. You'll have to go through the Windows XP installation process, and once Windows XP finishes installing and restarting, you can begin adding Bryce 3.

In the window running Windows XP, click Devices > Optical Drives > Choose a Disk File > Add and add the Bryce ISO file. If it isn't already, tick the checkbox for the Bryce ISO file from Devices > Optical Drives. You may need to restart the virtual machine.

Once you've restarted, turn the Virtual Machine back on and, in the file explorer in Windows XP, go to the My Computer folder and open the Bryce disk. Then, find the SETUP.exe file (There's a lot of files named "SETUP," so make sure to find the right one. One serial number input later, and you now have Bryce!

Unlocking Bryce 3



Now you have a virtual machine that can run Bryce 3. Great!

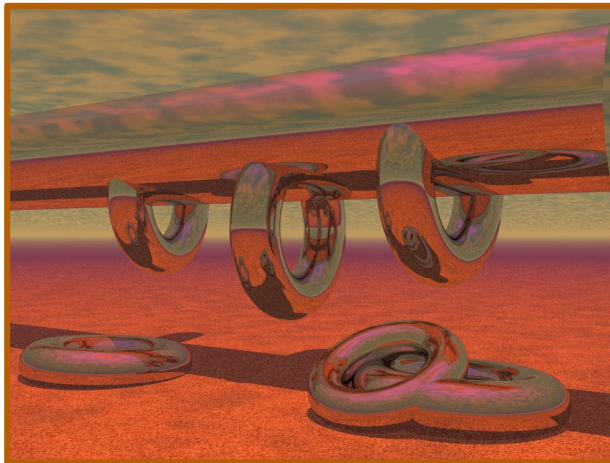
Now do yourself a massive favour. Mount the VHD (Virtual hard drive, a.k.a the folder with the extension .vhd), open whatever file explorer you are using and copy the whole drive onto your computer (or just keep the VHD mounted permanently).

If you go into this drive's programs folder, you should see folders relating to Bryce 3, as well as the Bryce 3 executable. You see, the installer for Bryce 3 is the only thing that isn't Windows 10-and-above compatible. The actual installed application runs fine!

Better yet, running Bryce 3 on Windows 10 gets rid of the issues regarding rotation and animation, where the slightest mouse movement results in massive changes. Keep in mind, you will still be limited to .bmp files when exporting image renders, but as a free option, this way is the best way.

First Steps

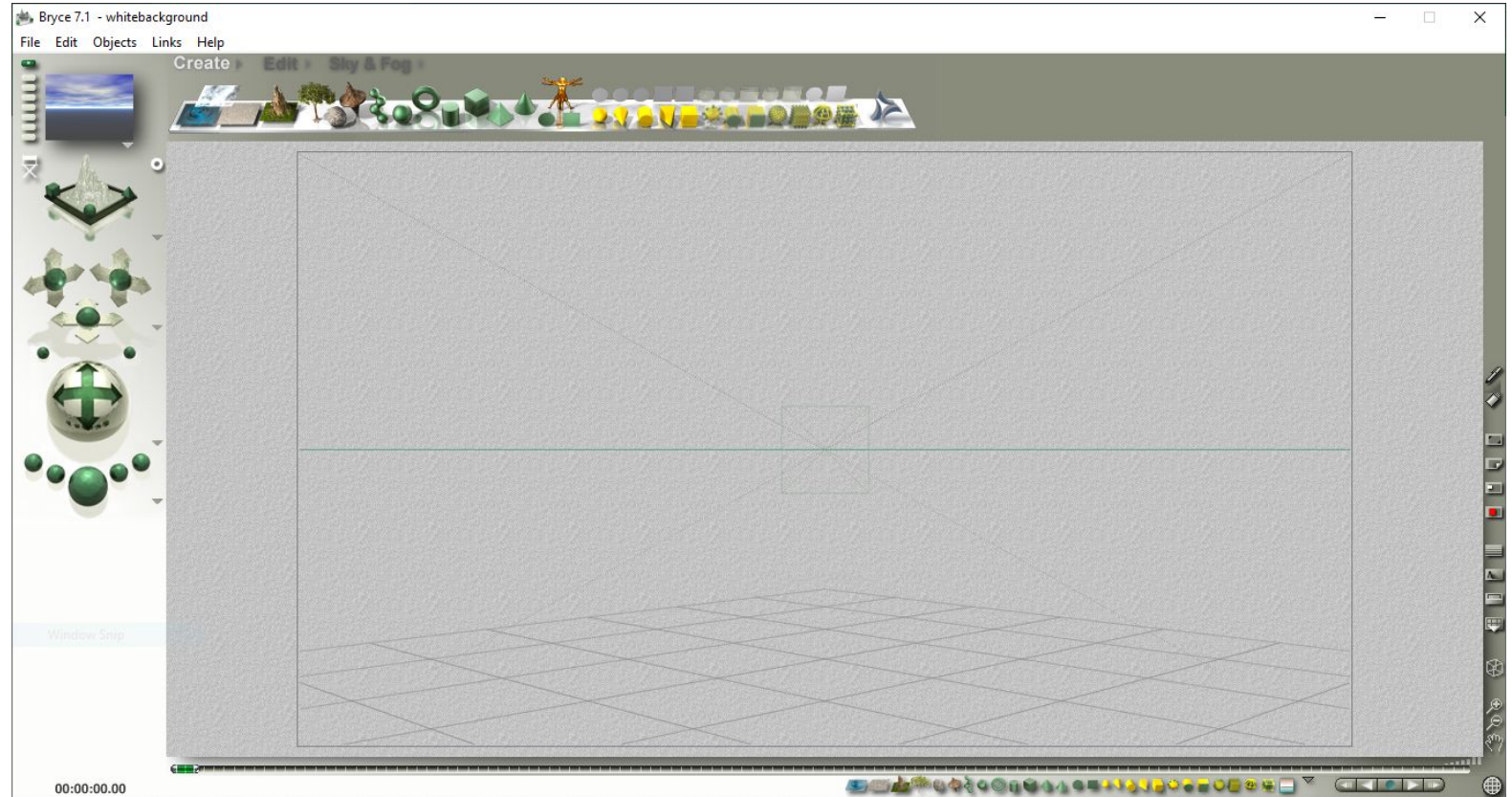
Congratulations on getting Bryce! If you did just get it, I would recommend just placing random things in your scene. Water here, Sphere there, add a chrome texture to all of it, do whatever you want! Your scene is your world, do what you want in it. Your render doesn't need to look fabulous, but it should be yours. You'll look back at your progress and see these first renders. Below are some of my first renders. They aren't the best (of course), and some of them even look rather bland and uninteresting. However, I'm still very glad I made them. They're basically a relic of my skill, and it's nice to see how far I've gone.



First (Professional) Steps

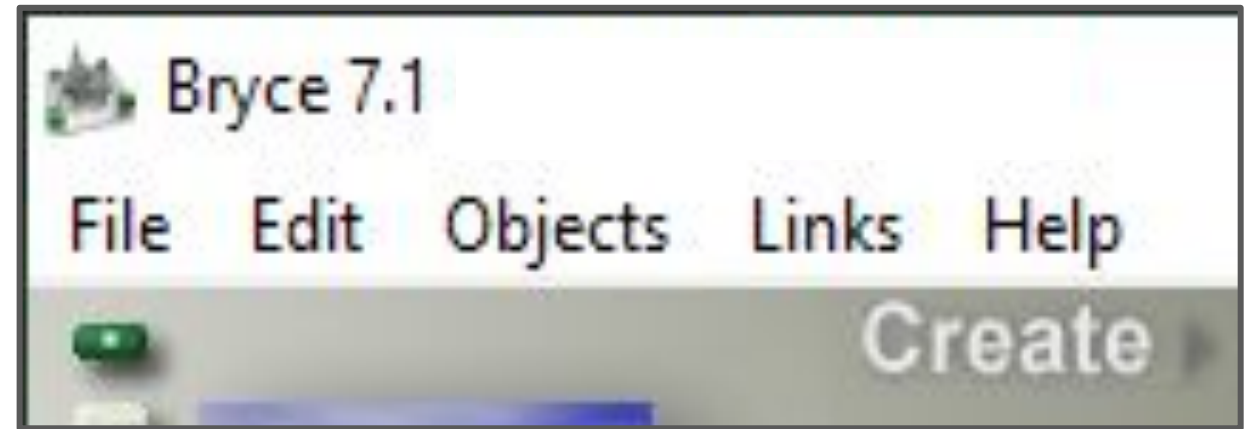
You've used Bryce, but you realise you've done as well as, well, a novice. You'll occasionally press a button, but otherwise, this baby's on autopilot. And that's ok, because you'll still probably make great art, but it doesn't hurt to know about everything in Bryce! To start, simply open up Bryce. You'll be met by this screen on the right.

(Note: This segment is very paragraph-heavy, and most pages are just a wall of text!)

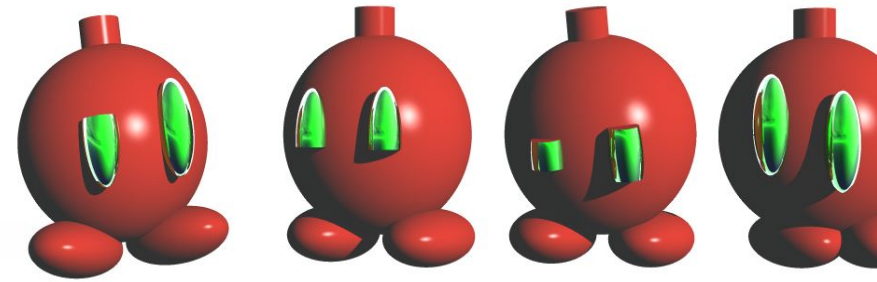


Features: Window Bar

Starting with the very top bar (on the window, not in the Bryce editor), you'll see 3 options. Well, 5, but only 3 of them are important for making renders. Starting with the File tab, which contains the usual "Open," "New," Saving, Importing and Exporting. It also has the "Render to disk" and "Render Animation," which will export your render as an image file or video file respectively. The rest of the options relate to the actual Bryce editor, just like the Edit tab. The edit tab has the usual "Copy," "Cut," "Paste," and they all work how you would expect. The rest of the options relate to selection objects and manipulating them in other ways. Finally is the Objects tab, which provide grouping, and various other ways of manipulating objects and their materials.



Features: Power in Editing



In the Edit tab of the Window Bar, you'll find "Copy/Paste Matrix" and "Copy/Paste Material." These are pretty self explanatory; Copying a matrix copies the scale, rotation, and position of an object, and applies it to whatever object you paste it to. Copying a material copies the appearance of the object and applies it to whatever object you paste it to.

The Replication tools are also self explanatory. It replicates your last move or addition in relation to your current selection. This means if you place a sphere, move it, and then replicate it, another sphere will appear in relation to the first. Multi-Replicate and Random Replicate do the same thing, but multiple times and with some variation.

Another useful feature is Duplicate, which will make a clone of your current selection.

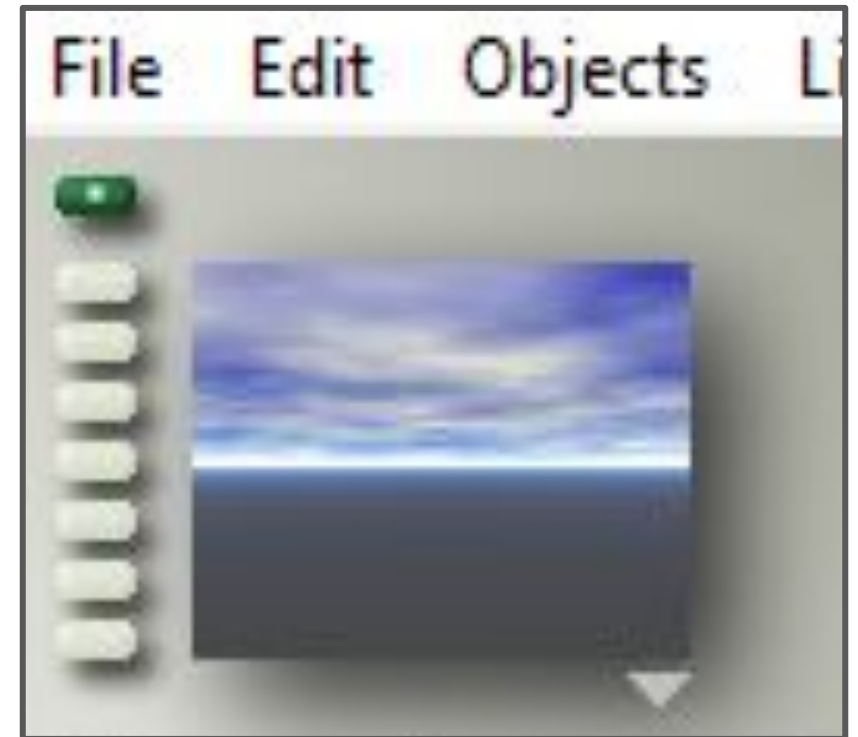
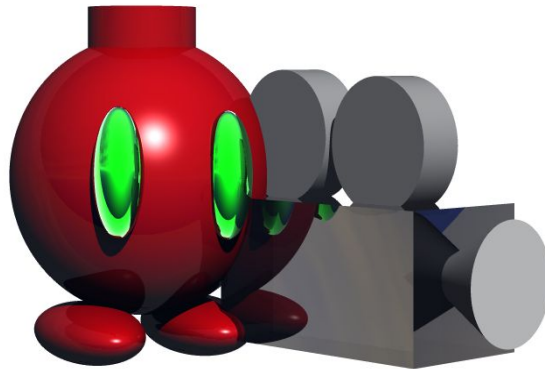
Most of the features in the Edit and Object tabs are very useful, and you'll be using them a lot. So, it's best to know the shortcuts to them. The shortcuts are usually listed to the right of the option in the dropdown menu.

Features: Nano Preview and View Options

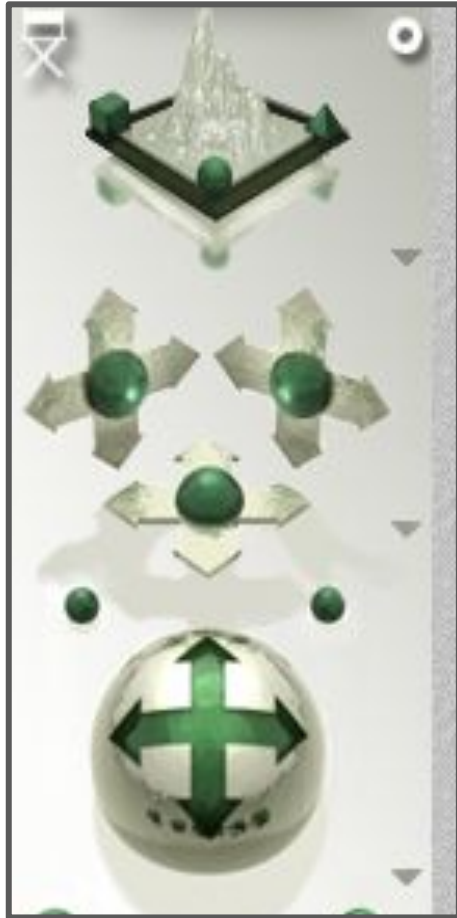
Just below of the File and Edit buttons, you will find a small preview showing what your scene looks like. When clicking on the small arrow below the preview, you can change settings regarding to the preview, such as What the Preview renders, the preview's camera, the quality of the preview, and if the preview updates automatically.

The buttons to the left of the preview act as camera presets for a scene. The top button brings you back to the default camera, the same camera that every scene starts with. When you move the camera around, you can click any other button that isn't highlighted to save the camera properties. Then, when you click on a highlighted button, the camera will revert back to the angle and position saved in that slot.

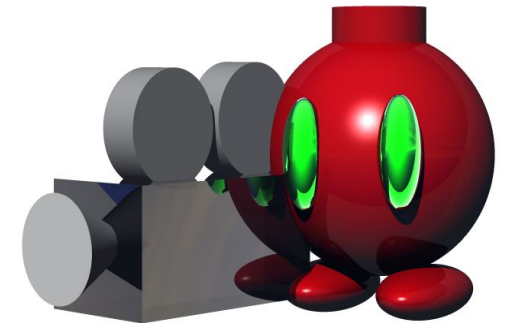
You can press Alt+Mouse1 to remove a camera state.



Features: Camera Controls

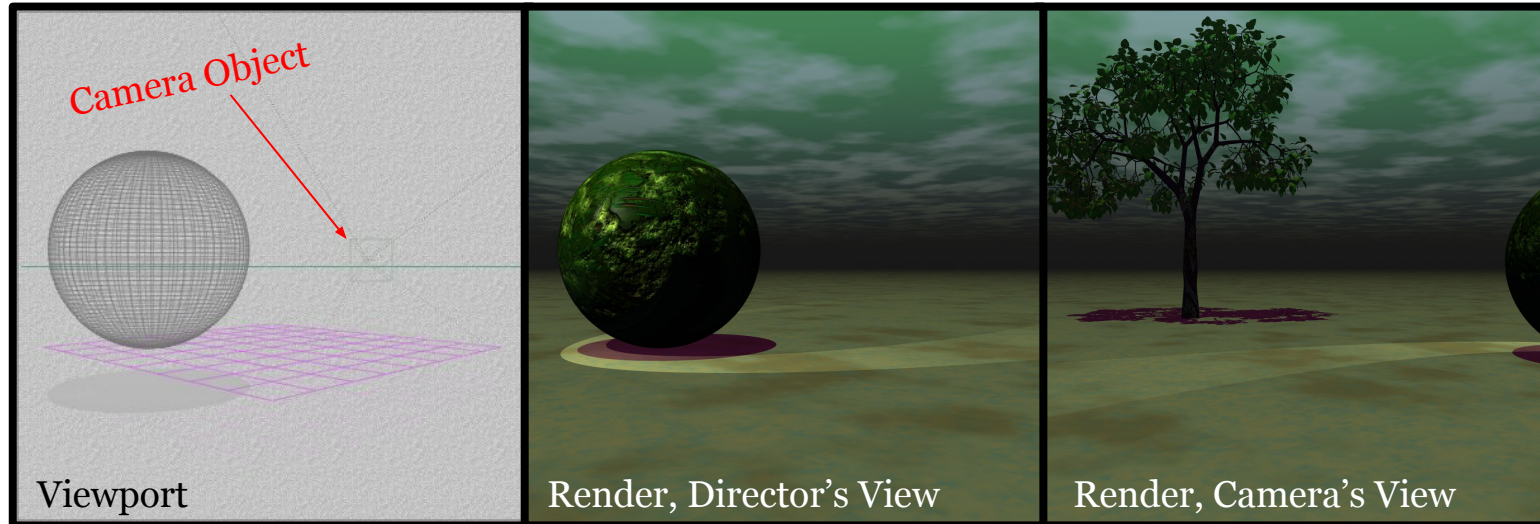


Below the Nano Preview is the heap of Camera Controls. Starting off with the white icon on the top left, which will switch your perspective (more on that on the next page). The circle on the top right allows you to switch between to and from Fly-Around mode, where you get a bird's eye view of your scene spinning around. Below that is an island with a cube, a sphere, and a pyramid. It allows you to change the perspective of your scene, allowing you to see if from the top, side, bottom, and other angles. Below that are a bunch of arrows, which allow you to move your camera on 1 to 2 axis (you can move it one way or in two ways at the same time). The circles below that allow you to change the Banking and FOV. The circle with the arrows allows you to change the angle of the camera. All of the options under the grey arrows perform the same tasks as their respective controls.



Features: Director's View and Camera's View

But what really is the difference between the Director's View and the Camera's View? In short, the camera view is a lot more dynamic and has a lot more customizability than the director's view. They both move with the same controls mentioned in the last slide, but the biggest difference has to do with animation. You simply can't animate the director's view. However, looking at the first image, next to the big sphere, there is the camera object. This object can be moved just like any other object in the viewport, such as the sphere. It can also be animated just like any other object, thus allowing the camera to move during an animation, something not possible with the director's view.



It can also be used for more novel ideas, like as seen on the left. The second image uses the director's view and the third uses the camera view, which has been adjusted.

Note that, in the camera view, we can still see some light that was being projected to the ball, and a tree previously not visible can be seen.

Features: Render Controls

Below the Camera Controls are the Render Controls. The leftmost button disables and enables object textures. The 2nd button turns on Fast Render, which skips some of the render process, going straight to anti-aliasing after rendering the image once. The big button simply renders your scene. The 4th button resumes an escaped render, and the rightmost button clears the escaped, unfinished render, and starts a new one.

When pressing the grey arrow, you're able to change the render quality, optimisation, report settings, perspectives, and aspect ratios.

The option "Render Options..." allows you to change Anti-Aliasing mode, Preview render settings, post processing, optics, and light settings. The rest of the options are preferences found elsewhere in the render controls sub-menu.



Features: Render Options...

Below are a few renders of a metal ball over an ocean during the day. Each renders have different render settings.

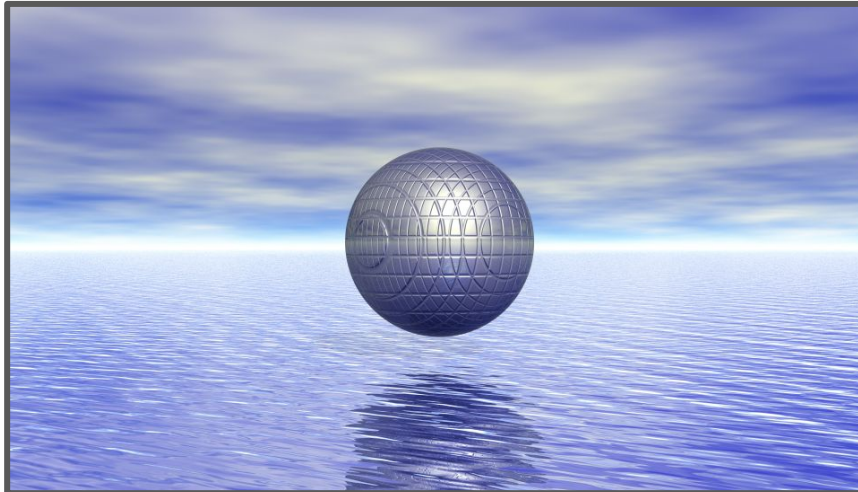
Regular Render

Time: 00:38



Premium Render

Time: 03:05

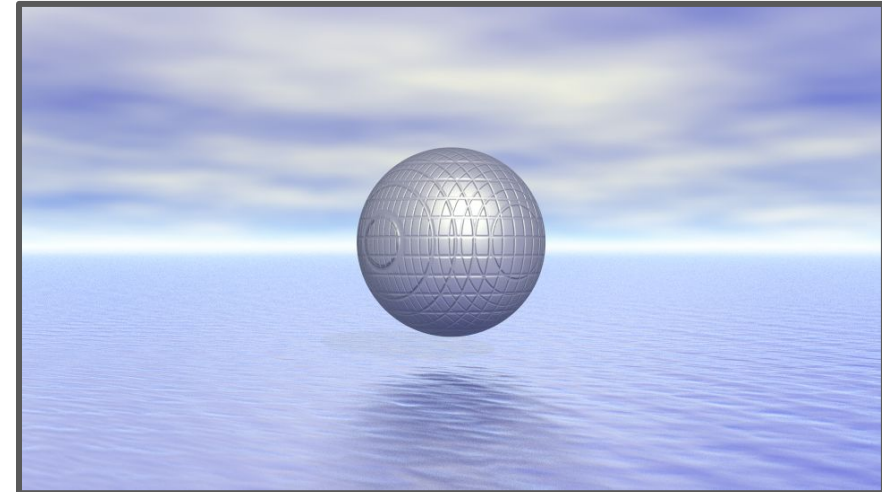


Premium Render

All Premium Effects

DOF and Light Boosting

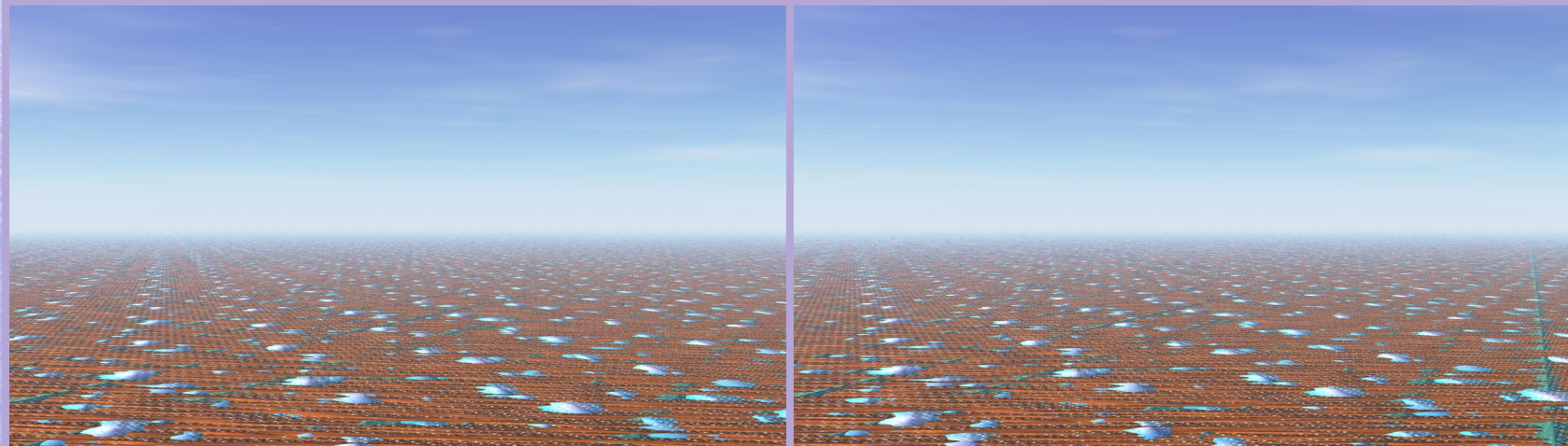
Time: 07:33



Features: Infinite Planes

Infinite planes are objects that appear as large planes on the viewport, but appear infinitely large when rendered. There are three types of infinite planes; Water, Cloud, and Ground. As far as I'm aware, the only difference between them is what material they are created with, where they are created, and their starting scale. To prove it, I rendered all three using the sky "Peach Haze" and the material "Mermaid's Hair." They're basically identical, but the ground plane render's material was rotated slightly. They all took 37 seconds to render, and they even had the same file size!

Oh, and the reason why there are only 2 renders is because the Water and Cloud renders were exactly the same.

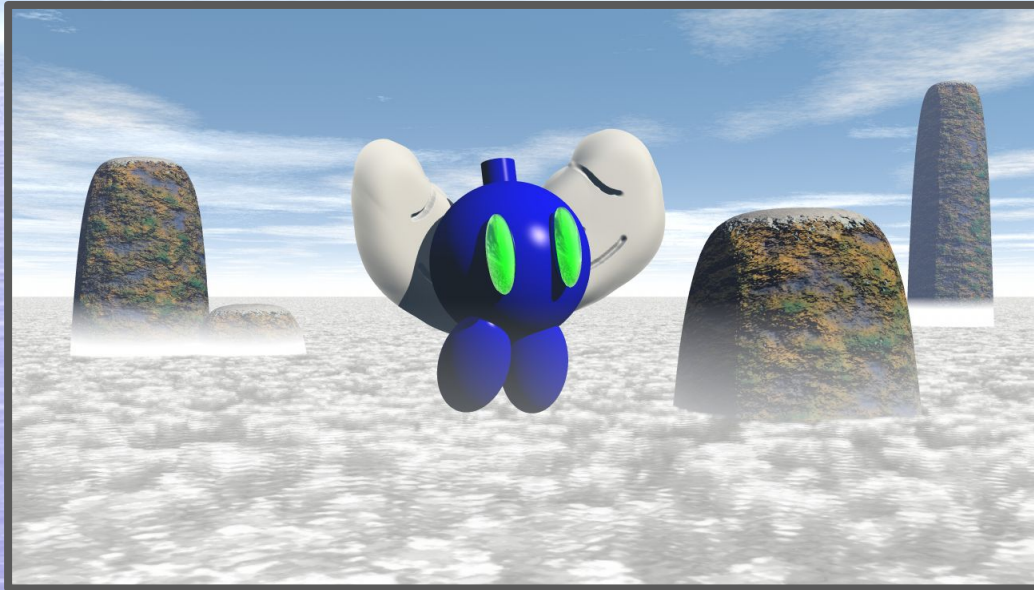


The background is a little render showing off the infinite planes.

Sometimes, a Water/Ground plane and a Cloud plane is all you need to make a visually appealing image. Although, if you do use the cloud plane, it's best to find a sky without clouds, or edit them in the sky lab.

Features: Infinity Cubed

Usually, an infinite plane works fine, but if you want more depth (say you are making a sky with clouds, and don't want to use a flat plane or the sky lab), you can use a volumetric slab! Hold one of the three plane objects on the create tab, and you should see a menu asking for either a Surface or a Volume. Click Volume, and a cuboid should appear.



On the left, you can see a volumetric slab being used for clouds below the scene.

Despite the slab being infinite, both the width and depths can affect the slab in meaningful ways.

Volumetric slabs are (in my opinion) best used with cloud volumes (particularly the ones in Atmospherics > Planes-Volume and Cosmic-Volume). There aren't any water volumetrics and the volumetrics found in Misc > Volumetrics can look good, but take long to render.

Features: Terrain

Bryce is known for its superb fractal terrain abilities. That's why the program is called Bryce. It's in reference to the Bryce Canyon in Utah.

Back on topic, Terrain is randomly generated, so each time you click the terrain button, you'll get a brand new mountain. This is useful for making backdrops for a scene.

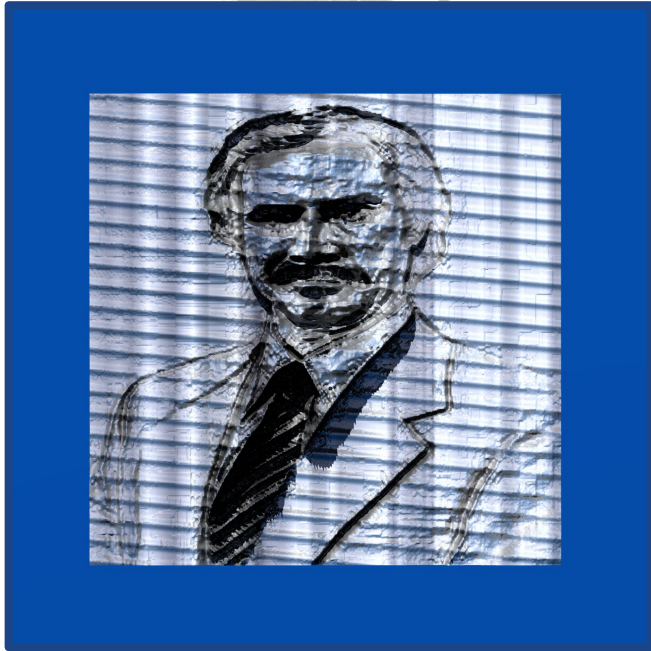
However, Terrain on its own is pretty bare bones. This is where the Terrain Editor comes in. When selecting a terrain object, click the [E] button (Edit) that appears beside it, below the [M] button (Material Lab) and above the [↓] button (Landing). This should bring you to the terrain editor.

In this editor, you can paint the height of the mountain, apply various effect and edits to the canvas, and even animate it.



Features: Messing with the Terrain Editor

You can also import images to use as heightmaps, although the image is resized to a 1:1 aspect ratio. Any image put in is turned greyscale, and then is treated like a regular terrain canvas. Of course, wackiness ensues.



Anchorman's Ron Burgundy in David Brinnen's Threaded Bar.

The Brazilian Entertainer Ricardo Milos, embodied in a flower field. Only complaint; looks demonic.



Is the Earth round or flat? Both wrong! It's actually Mario and Bowser shaped.



Features: Trees, Rocks, and Lattices

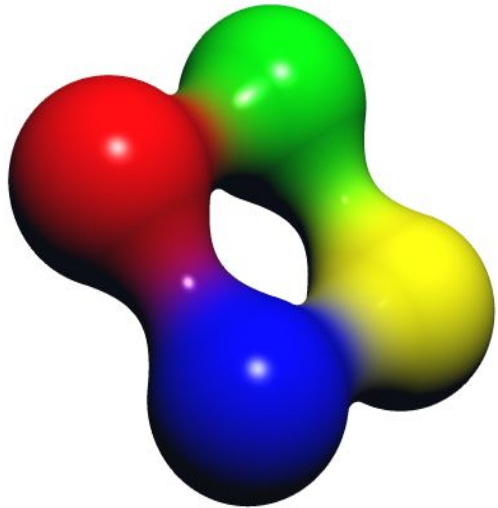
As well as the Terrain object, the other random objects are the Trees, Rocks, and Lattices. A tree is... well... a tree. Sometimes it'll have different coloured leaves. A rock is... well... a rock. The rocks created usually range from rough to smooth, and there are options to smooth rocks out in their edit menu. Finally are Lattices. These are basically 2 Terrain objects directly on top of each other. They have a similar editor to Terrain objects, but when Alt Clicking on the canvas for long enough, the spot will go from black to red. The red space has no height, and isn't rendered.

Trees have their own editor. It allows you to change settings about the tree's trunk, branches, tree shape/type, and foliage. This allows you to produce certain other trees, like palm trees.



Features: Metaballs

Metaballs are pretty magical. Imagine you wanted to make a bean in Bryce 3. Easy, right? Well, no. Bryce 3, nor Bryce 7, has a bean/capsule object (well, it does, but it is a mesh, so it isn't smooth like spheres. So, you would either have to make a bean amalgamation out of 2 spheres and a cylinder, or import a bean model. Not with metaballs! Metaballs act just like spheres alone, but when close enough to another metaball, the two will join, producing geometry linking the two balls. The two balls' material will also merge. A good example is this "Windows Metaball," which features 4 Metaballs. Each are linked by a small section, and those small sections fade between the two materials.



However, just because you *can* metaball, doesn't mean you *should* metaball. Ignoring the prone crashes provided by the metaballs, they are capable of making abominable horrors just as easily as making the perfect object.

Regardless, the power of the metaballs is only accessible in Bryce 7. Bryce 3 doesn't have metaballs.



Features: Primitives

There are 6 primitive objects. They are spheres, tori, cylinders, cubes, pyramids, and cones.

Only the torus is editable, allowing you to change the torus' radius. However, this radius is capped a lot higher than 512, allowing you to make 2 circles inside of each other.

There are also 3 2D primitives, being the 2D Face, Disk, and Picture Objects.

The Face and Disk act like flat planes, being a square and circle respectively.

The Picture Object is similar to the Face Object, but you can import images to use as a material. When creating a Picture Object, you'll be brought to a menu with three big images and a grid of smaller images. To add images, just press one of three Load buttons, or click on a blank space on the smaller grid.

With the image editor, you can also make images with transparent backgrounds like the one seen on the right of this page. Once you have your transparent image, go to the Materials Lab and set all settings into the corresponding slot (Usually the A slot, more on this later).



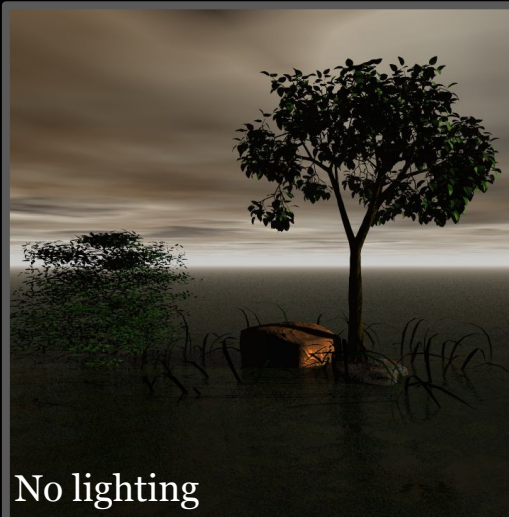
Mario and Bowser looking at a photo of themselves. The image was not added in post. It is part of the scene!

Features: Lights

Oops! Looks like someone turned off the lights on this page. Not to worry, we'll just add our own!



These are the 5 light sources (4 in Bryce3. The Round Parallel Light is missing). The first of these is a Radial light. It lights up all around the light object, rather than just towards a specific direction. A good way to demonstrate this is with a scene like the one on the bottom left. It isn't the best render, but it will demonstrate how light affects a relatively normal scene.



No lighting



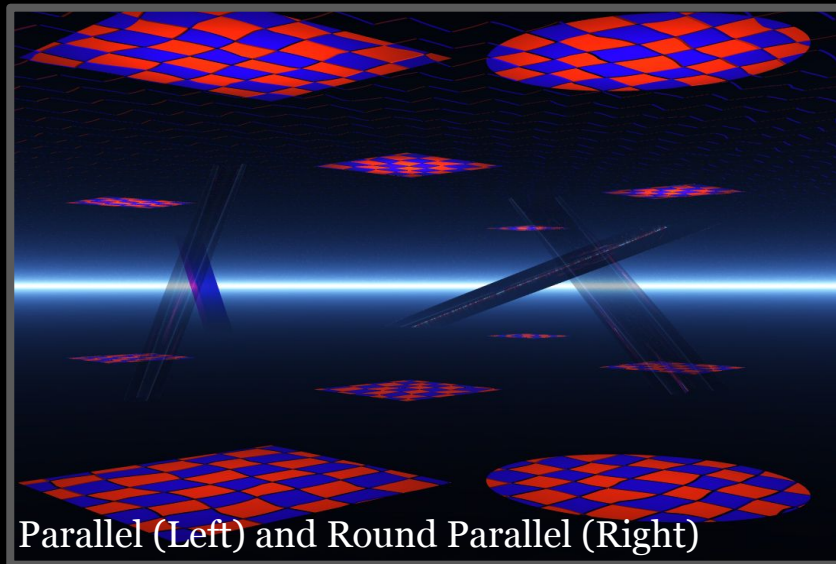
Radial lighting

As we can see, the radial light lights up the whole scene, providing light to multiple areas rather than just one or two. This is great to use if your scene is just a bit dark, and you want the whole room to be a bit brighter.

The other light sources, being the Spotlight, Square Spotlight, Round Parallel, and Parallel lights, all focus the light on one or two areas.

Features: In the Spotlight

We can use our little foliage example to show the two spotlights as well. In the two renders to the right, we can see that not every angle is lit up like the radial light did. Each spotlight has been raised up, so the light covers the whole scene.

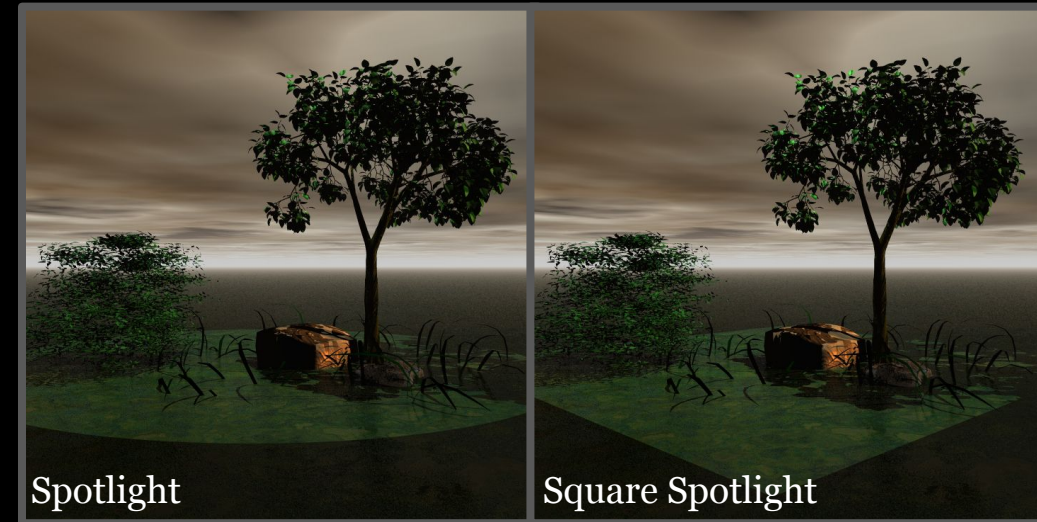


Parallel (Left) and Round Parallel (Right)

For the parallel lights, we can't use the same scene to great effect, so, on the left, is a room with a floor and ceiling.

The parallel lights in the viewport are roughly in the middle of the floor and ceiling, yet they project a spotlight that hits both surfaces.

Apart from the object that represents them on the viewport, they are identical to two spotlights parallel to each other.



Spotlight

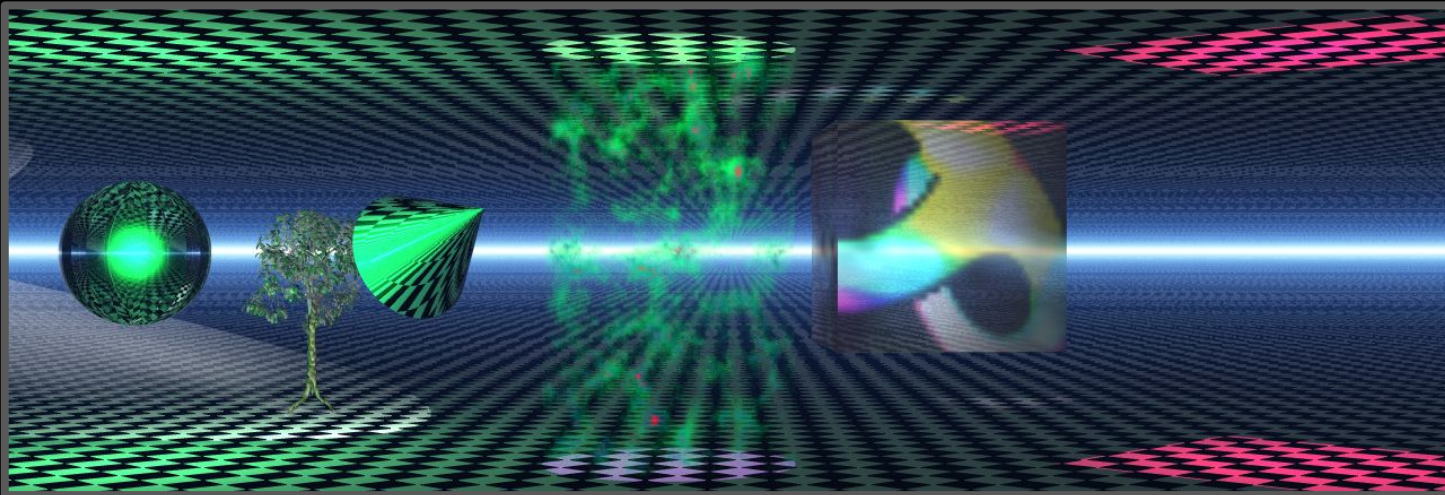
Square Spotlight

Features: Work the Light

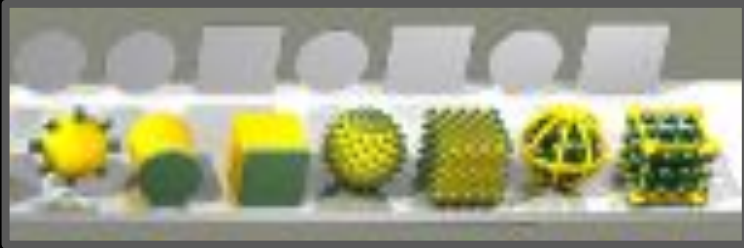
Don't like the light? Well, just like most things mentioned already, all light objects have editable properties.

In the Light Lab, you can change the type of light, shadow properties, render options, strength, colour (with gradients too!), the image casted by the light, and other settings.

You can see them all in action in the fever dream render below.



Features: 24 Carat Light Source



But what about the lights exclusive to Bryce 7 Pro? Well, don't worry, because you're not missing much. The distant light, being the Circle with multiple circles around its circumference, acts as a super version of the radial light. It lights up your entire scene, not just objects in range of the light. Moving the object does nothing.

The next two objects are basically the same as their free counterparts; the Round Parallel and Parallel lights. They look the same, they have the same name in the editor and same model in the viewport. The only difference is that the two Pro Parallel objects can have the "Infinite Width" and "Directional Control" properties, making them identical to the distant light. The Sphere Dome and Cube Dome lights act as an alternative to the radial light. Changing the properties allows you to have light within or outside of a dome (seen in the viewport).

The last two are fill lights. They're quite complicated, but simply, if you make a big cube, put a cube fill light inside of the cube, set the light's colour to a gradient that goes from black to white, put a tree inside the cube, move the camera inside the big cube, and render, you'll get something like the image to the right. The fill lights put light inside objects, illuminating the objects within those objects.



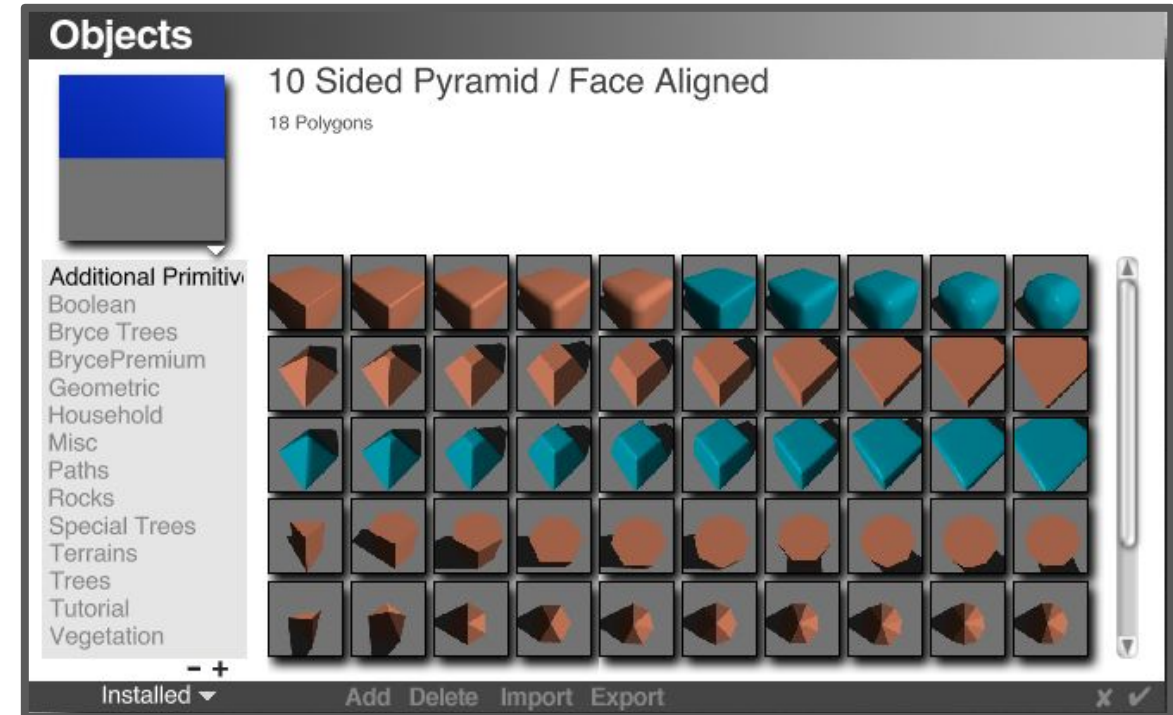
Features: Objects Menu

Again, if you press or hold the grey arrow next to the Create tab, you'll see the Objects Menu. This menu provides many prefabs for you to use.

However, you can also Add prefabs to this list. To do this, select an object or group, then go to the Objects menu and press Add. You'll see a prompt asking for a name and description for your prefab. Once you fill that out, your prefab is now saved to the selected Category. As well as this, you can delete prefabs, as well as add and delete categories using the + and - buttons at the bottom.

You can also import and export Bryce Prefabs. This allows you to export or import a .obp file.

This is not how you import 3d models! That is done by going to File > Import Object.

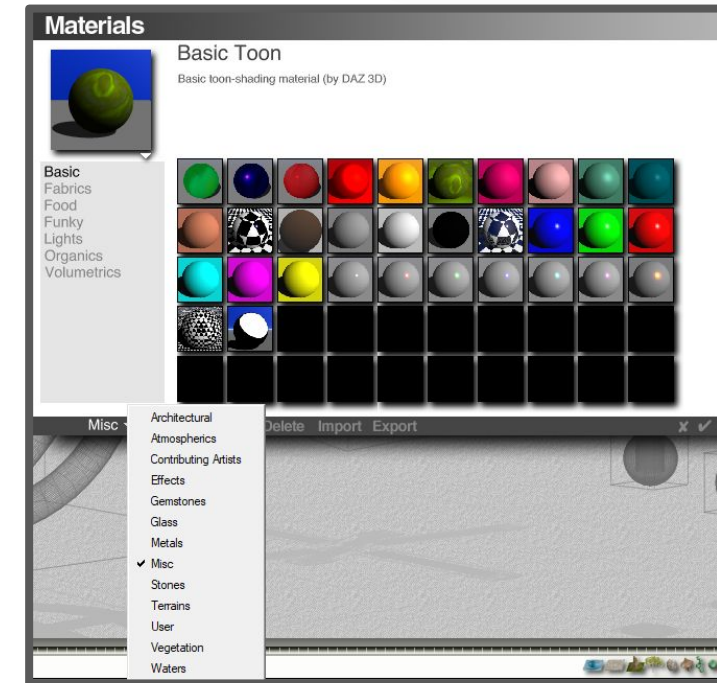
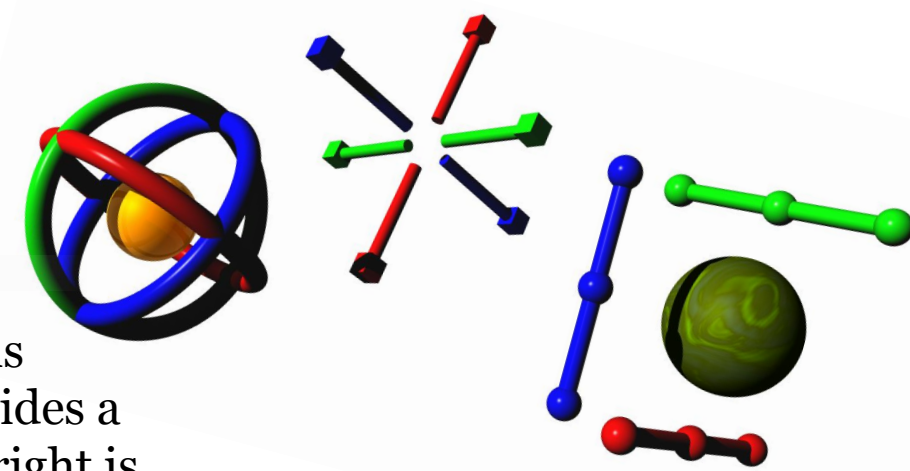


Features: Edit Tab

The edit tab is where you can manipulate shapes and objects in your scene. This include scaling, rotating, transforming, aligning, and randomizing. It also provides a shortcut to the Material lab and Terrain Editor. The two-way arrow at the top-right is a way to transform your current selection into any of the objects presented there.

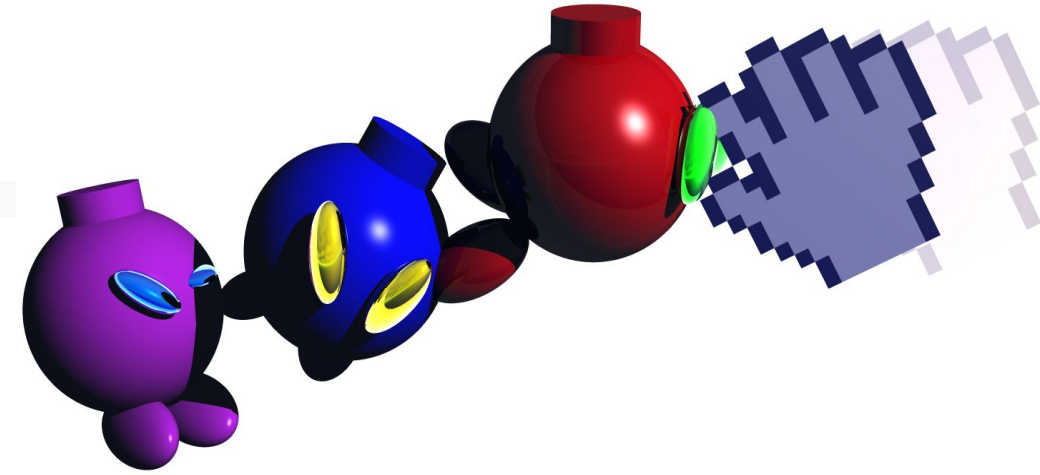


menu, clicking the grey arrow next to the Edit tab will bring up a whole gallery of materials. There, you can pick a material to add to your model. Bryce 3 has a much smaller range of materials, but Bryce 7 has multiple categories of materials like “Metals” and “Stones,” each of which has their own sub-categories like “Industrial Metals” and “Marble” respectively. Similarly to the objects menu, you can also add and delete categories, as well as add, delete, import and export material prefabs. Now, you’ll be importing .mat and .shd files.



Features: Transforming Objects

The Materials Lab will be brought up shortly, but for now, let's stick to something a bit more basic: Transformation tools! More specifically, Transforming, Scaling, and Rotating an object. All three of these actions can be done without using the edit menu.



To transform, simply drag on the object around the viewport. If you click one of the several black squares, you will instead scale the object. The text that appears when hovering over a black square tells you what axis the object will be scaled on. Dragging on a black square while holding the Control key will instead rotate the object. The object will still be rotated in the black square's respective axis.

Holding the Shift key will scale or rotate the object in large increments, and holding the Alt key will rotate a lot slower with higher precision. Holding Alt while scaling will scale the object while keeping its centre position the same. Clicking on a black cube while holding Control and Alt will bring the object back to its default scale. To rotate with higher precision, you need to first drag the square while holding Control, and then start holding Alt as well.

Features: Advanced Basics

The basic transform, rotate, and scale options are usable on the viewport and with the icons in the Edit tab. However, there are grey arrows next to each icon, and as you would expect by now, these arrows provide extra transform options.

Each sub-option allows you to transform, rotate, and scale in reference to the whole world (Default), the object alone, or the camera. These are pretty useful, but they're mainly a great asset for scaling. Scaling a single object in reference to the world usually causes ugly warping if the object is rotated. However, when scaling in reference to the object, scaling is as easy as it should be, and the weird warping is nowhere to be seen. As well as this, each tool has a sub-option labelled "Un-transform/scale/rotate" respectively, which resets its respective values to their defaults. There is also a "3D Transformations..." option, which allows you to set values corresponding to the object's position in relation to the centre of the location of its creation, as well as the rotation and scale.

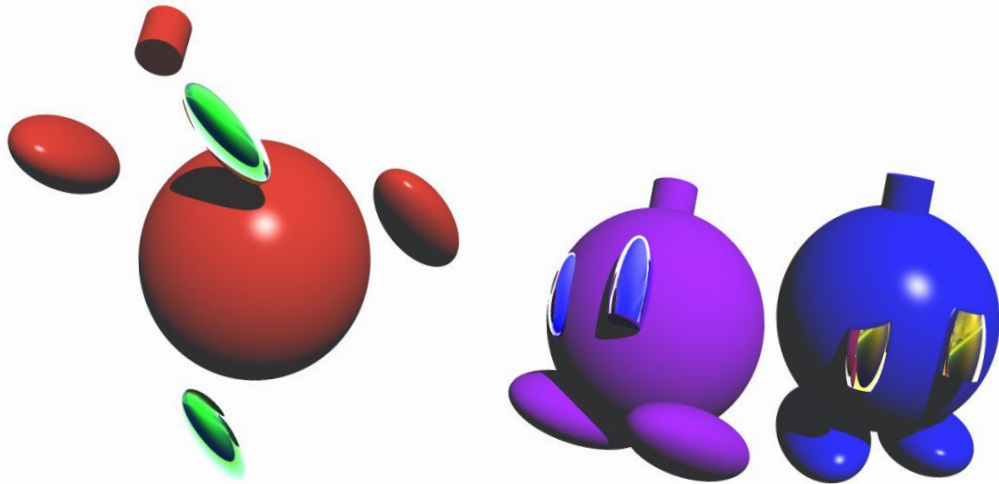
The scale sub-options contain 3 extra options, each flipping the object on either the X, Y, or Z axis. This is useful because, unlike other 3d modelling programs, you can't negatively scale an object, so making an axis smaller won't eventually flip the object, it'll just make that axis really small.

Long story short, the flip tools are much appreciated due to the lack of alternatives.

Features: Chaos and Order (Randomize and Align)

Next is the Align and Randomize tools. Simply, the Align tool allows you to line up a group of selected objects to a particular axis. The Randomize tool allows you to randomize the position, rotation and scale of an object or group of objects. Starting to understand why this page is called Chaos and Order?

The align tool is somewhat useful, but only in tandem with the randomize tool. The randomize tool change spread out a group of objects, as well as randomly changing their rotation and scale. The randomize tool can also spread out objects in a 2d or 3d area (2d as in no objects change their Y position).

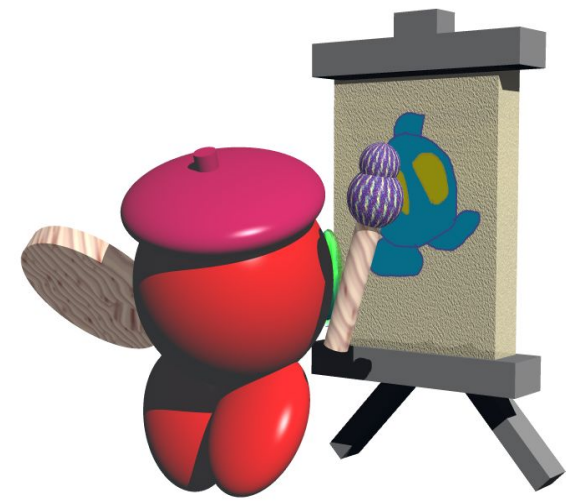


Obviously, it's still completely random and only partly in your control. Too much randomization can have... some interesting results...

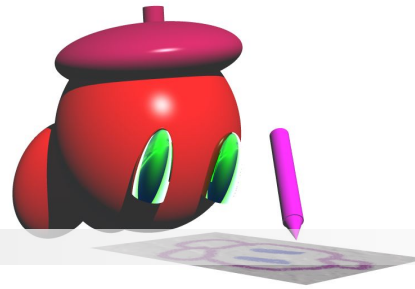


Features: Materials Lab

The Materials Lab is where you can modify object materials. Naturally, it's visited a lot. There are 4 types of material editors in Bryce: The Material Editor; one for Surfaces and one for Volumes, a Picture Editor (which was previously mentioned), and the Deep Texture Editor.



Features: Materialistic Matters



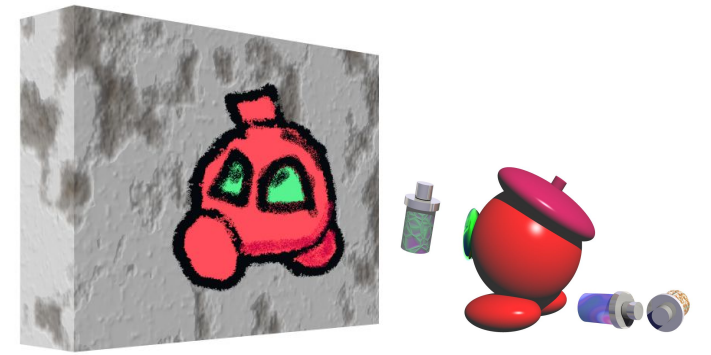
Surfaces have all of the properties listed on the right. Each are editable and can be sourced from textures (the images on the far right. When there are no textures, the letters A through D are present instead).

Each column of dots corresponds to a texture. Objects don't need textures to have a material, but no blue dots will be present on the four columns. If you click on an empty dot on a row that doesn't have a texture, a random texture will fill in that slot.



The grey arrow next to the material preview opens the Materials Library. The grey arrow below the preview lets you change the preview, like changing what object the material is previewed on. The sideways button to the left of Specular Halo randomizes the material's parameters and textures, and the sideways button below that one reverts the material to the default grey material. The grey arrow at the top right, next to the textures, lets you change how the material is rendered, such as making the material additive, or fuzzy, or a light.

Features: Scratching the Surface



To sum up what each value does, the first 6 control the colour of the material. Diffuse and Ambient are the main ones, as they control the colour of the object in the most abundant manner.

The middle 7 are sort of miscellaneous. It has features such as metalicity, and the ability to add a bump to the material, adding some extra depth. The Diffusion and Ambience values control how intense the respective colour is.

The last 3 all handle with reflections and transparency. Simply put, Transparency is how transparent the object is, Reflection is how reflective the object is, and Refraction controls how the object behaves with light. It can cause reflection without having any reflection set on the material!

Features: The Material's Accomplice

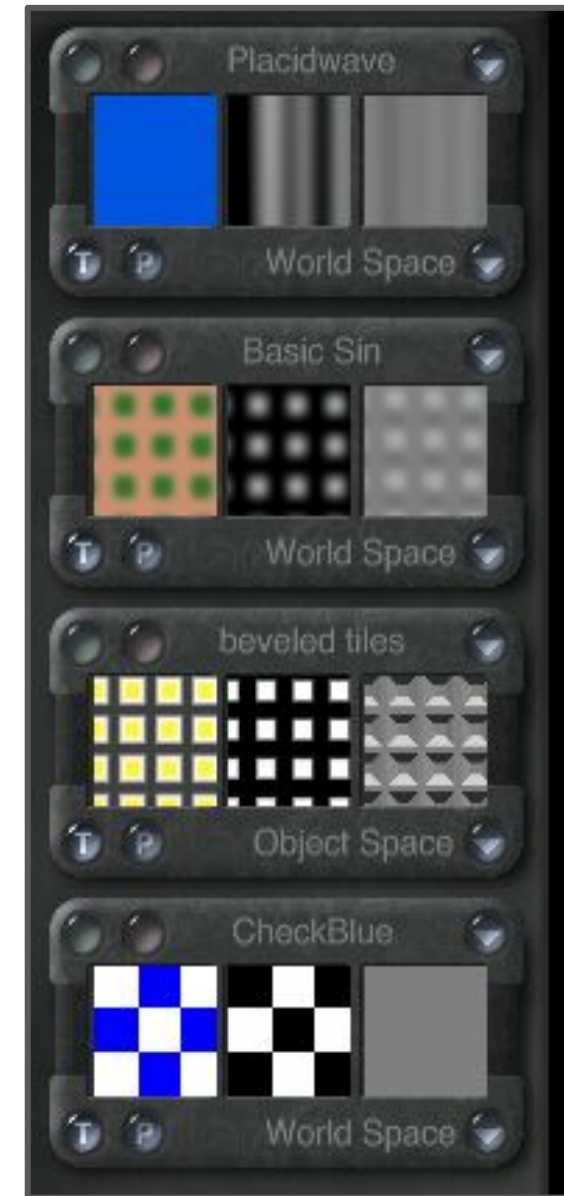
As mentioned, the boxes with 3 images in each are textures. They can add more depth to a material. To add one, click on an empty slot in the textures column. Then, one of the boxes on the right should appear. These boxes have extra buttons and values to modify.

The green button on the top-left brings up Transformation Tools, where you can Move, Rotate, and Scale the texture. This is useful for animating, as it allows for cool effects like an infinite plane with moving water.

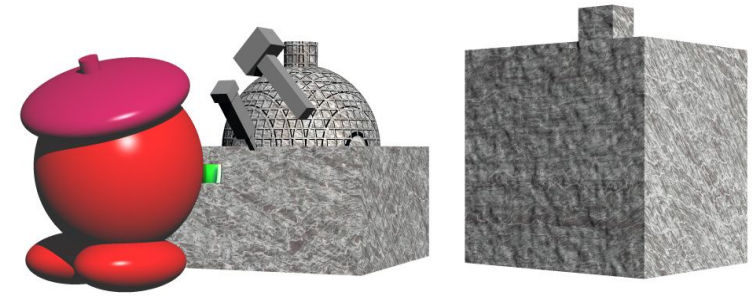
The red button on the top-left brings up the Deep Texture Editor. More on that in a bit.

The (T) and (P) buttons let you swap between a procedural and image texture. The top-right arrow brings up a list of textures. If you press the button while holding Shift, the textures are displayed in a library.

The bottom-right arrow lets you change how the texture is mapped to the object. This has a variety of modes, such as World Space, Object Space, Panametric, Spherical, Cylindrical, Random, and more.



Features: Making Volumes



To swap from Surface to Volume, click on the big green button with the rock or cloud in it.

Volumes are similar to surfaces except for, of course, their depth. Despite this, most of the settings are the same, except for the bottom 4. All of these are pretty self explanatory, and they all change the shape of the volume. Quality/Speed might be confusing, but that refers to the speed of the render, or how long it takes to render the volume. So more quality will result in a slower render. This is why Quality is represented with a turtle.

The grey arrow on the top right has slightly different settings, allowing you to change how the volume is shaded.

Features: In the Deep End (of textures)



If you don't like your textures, or want to modify them, then simply go to the Deep Texture Editor. You can find it by pressing the red button on a texture, as well as by going to the Edit tab, clicking the grey arrow under Materials, and selecting "Edit 3D Solid Textures."

The Deep Texture Editor, or DTE as it will be referred to, has 4 component boxes, one of which is the combination. In short, textures combine in specific ways and pass through specific filters to generate an output - the combination - which becomes the texture for a material.

In Bryce, the material hierarchy goes like this:

Materials > Textures > Images

Materials are made of Textures, which are images combined and filtered through the DTE.

Features: Component Magic



The components have a lot of different buttons, each with a unique function. The top-left button lets you add noise to an image. The buttons on the Noise prompt control which component is being modified. The bronze sideways button resets the component. The top right button filters the component. You can change the filter by clicking on the black bar with the filter on it (usually “None”).

The bottom right button lets you adjust the phase of the component. The sideways button on the bottom right randomizes the component. Doing this to the combination randomizes all 4 components. The C A and B buttons are toggles for if the components Colour, Alpha Channel, or Bump Map should be utilized.

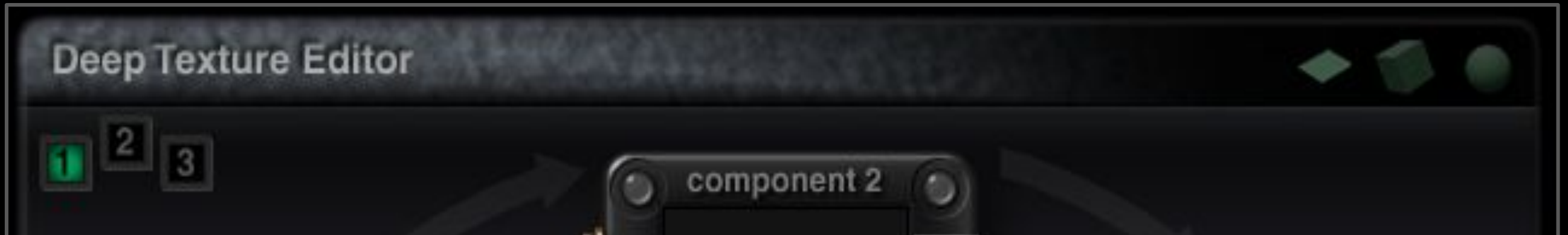
The three colours are the colours of the component. The arrow underneath the colours controls what the colours represent and how they are used.

Features: Deep Offshoots

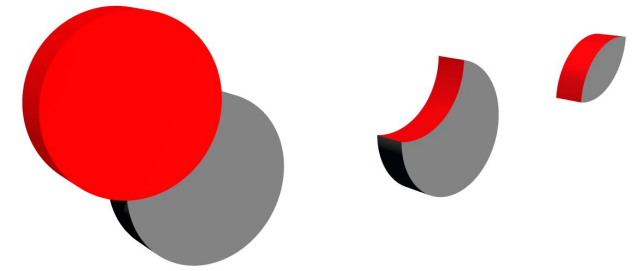
The numbered squares controls how many components there are (1 + the combination, etc.). The plane, cube, and sphere control what each components' image is shown on. It defaults to showing the image flat, but it can also be seen on a cube and a sphere.

The arrows between components is how the component is used in relation to the others. Clicking on the arrow allows you to change this.

Also, by Alt+Clicking on a component's image, you can get a full-screen render of it.



Features: Meshes and Booleans



You can make changes to your object's geometry using booleans in the object attributes menu. Booleans in Bryce are Positive, Negative, Intersect, and Neutral. Positive objects are objects subjected to change from Negative and Intersect objects. Otherwise, they look identical to neutral objects (unless converted into a mesh, which may cause them to look slightly different. Negative objects are invisible. When a positive and negative object are grouped together, any part where the negative object intersects with the positive object will also appear invisible.

Note: A positive object *must* be present in the group for the negative objects to be invisible. Otherwise, they will be visible and very much not negative.

Intersect objects are similar to Negative objects. In fact, they're near identical, and most of the properties mentioned above apply to both types of objects. However, when an intersect object intersects a positive object, only the part where they intersect will be visible, and the object will inherit both objects materials on their respective sides. Neutral objects are normal objects that aren't subject to any of the effects of Negative and Intersect objects, and they can't be converted into a mesh.

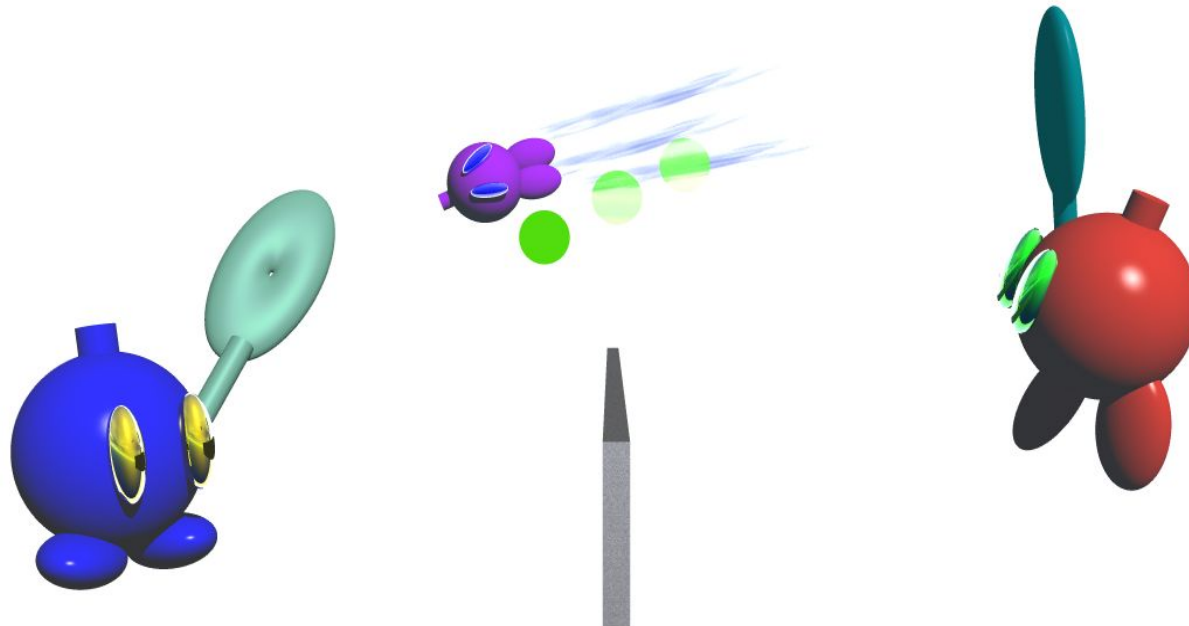
The top right graphic shows booleans in action. The last one, Intersect, have the materials of the two cylinders swapped.

Features: Origin Handle

Each object has an Origin Handle, which is the point where the object rotates. You might not have known, because the Origin Handle is initially hidden. To show your current selection's Origin Handle, go to its attributes menu and enable Show Origin Handle. This will make a little green dot appear, which you can move around.

Why is this important? Well, mainly for animation, which is touched on later. Also, objects linked to one another will change where they're linked to when the origin handle moves, due to the object being linked in relation to the origin of the object.

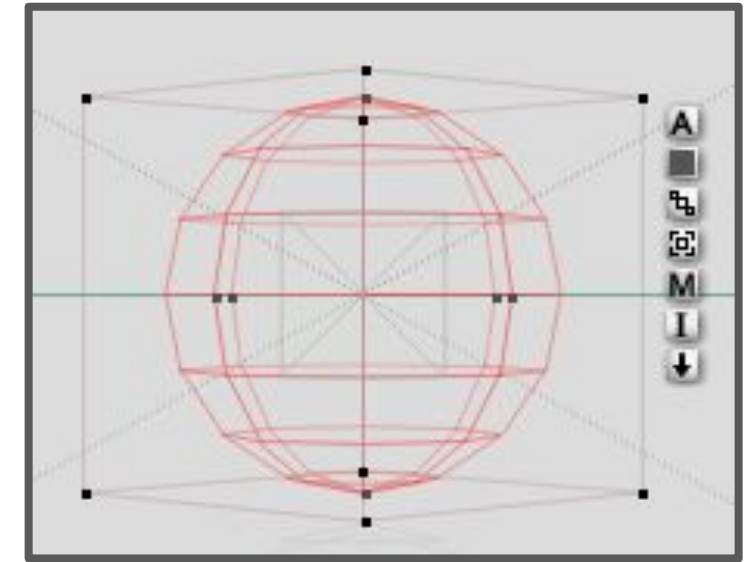
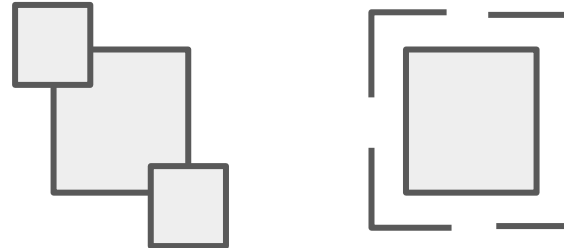
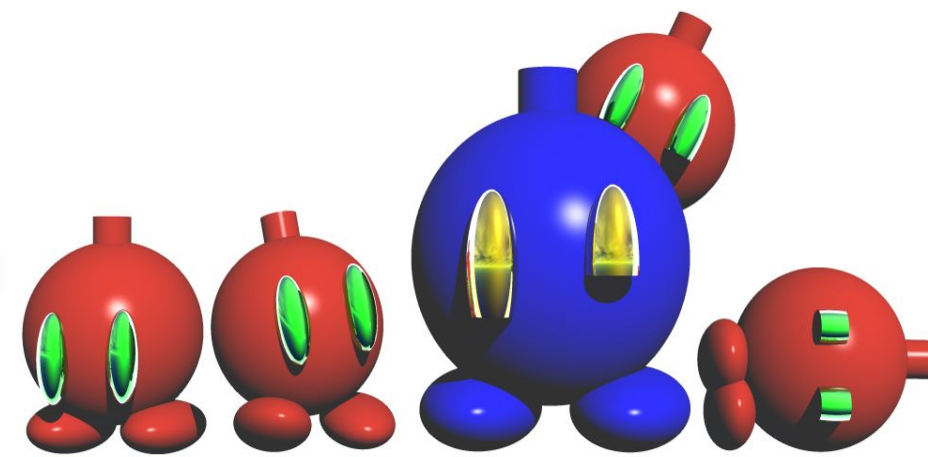
The “Tennis Origin!!”



Features: Linking and Tracking

When selecting an object, options will appear next to it. The button with three squares on it (left icon on the right) is the Linking Button. Holding on to it will bring up a line, and hovering over another object will link your selection to that object. Linked objects can move independently to the object they are linked to, but when the parent object (the object being linked to) moves, rotates, or scales, so will its children (objects linked to a parent). Objects can only have one parent, but can have as many children as you want.

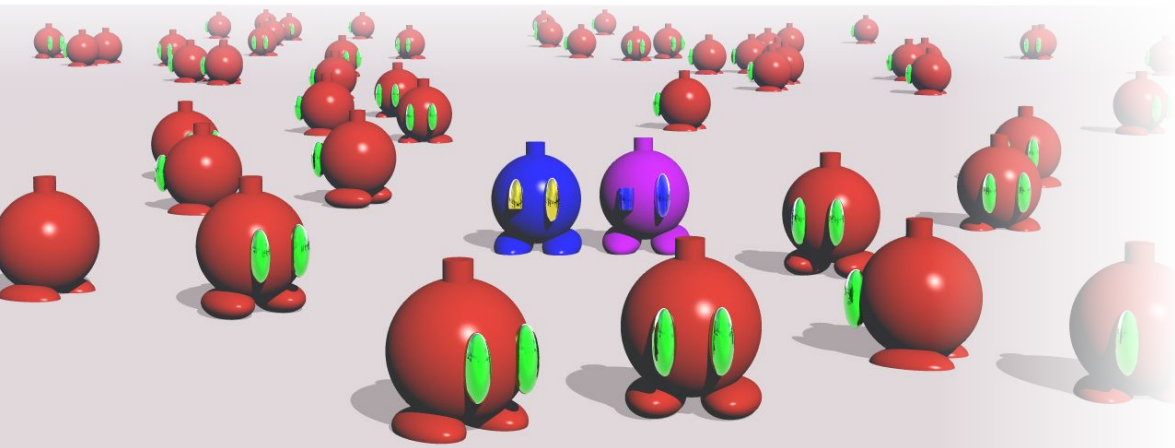
The button with a squares and lines around its edges (right icon on the right) is the tracking object. This simply makes an object face its parent (the object, not the origin handle). Again, a object can only track one other, but can be tracked by more than one.



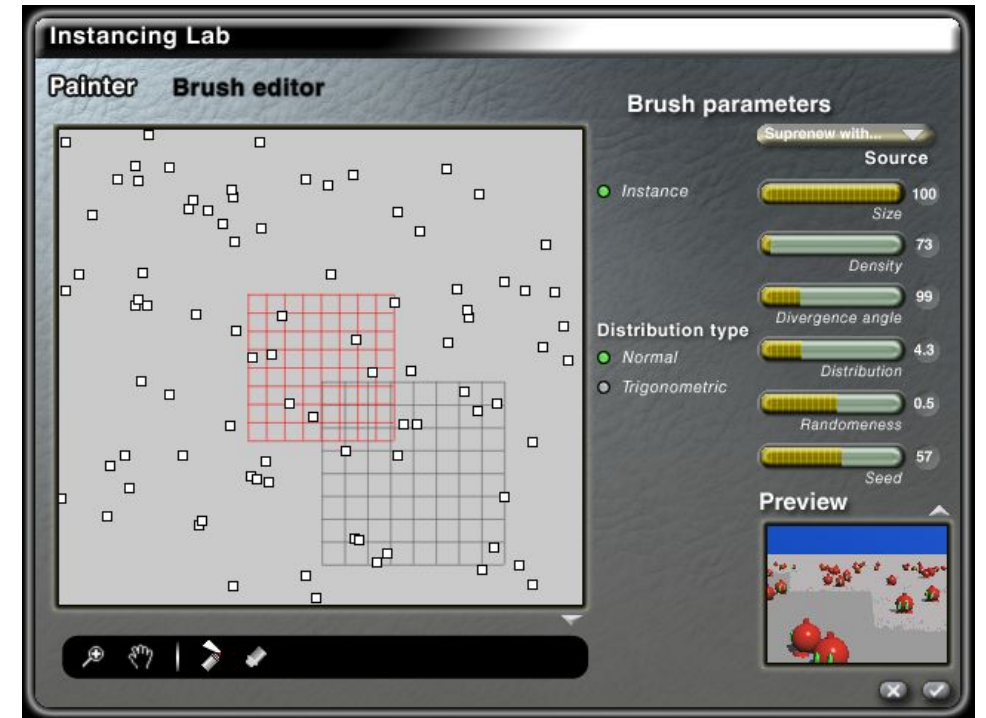
Features: Instancing Lab

If you need to spread a particular object across the surface of another object, while adding slight variations to each object, then the Instancing Lab is your go-to stop for exactly that!

The Instancing Lab has two tabs. The painter is where you can place down a mass amounts of objects at once, and change settings regarding how they are spread out. First, you need a brush, which can be created on the Brush Editor menu. This allows you to select one or more objects to be used as a brush, and properties regarding variance.



Although a mass amount of objects sounds fun (and is fun), your render time will skyrocket if the Instancing Lab isn't used sparingly!



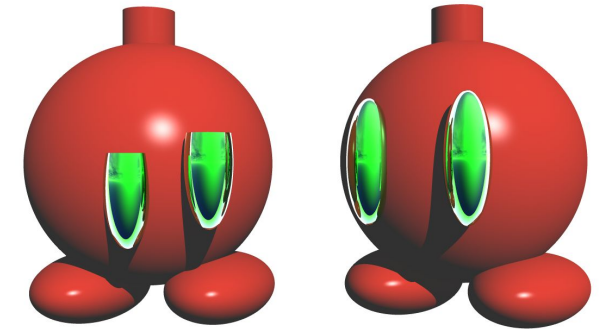
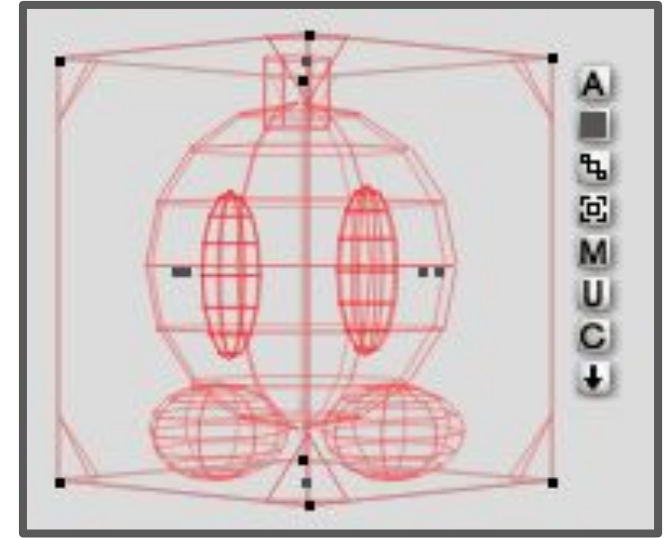
Features: Other Buttons

The grey square button below the [A] button is the family button. You can change the family of the object by clicking one of the colours that appear when pressing the button. Families change the colour of the object's hologram on the editor, and you can select every member of a family using the selection bar at the bottom right.

The down arrow button grounds the object, which changes its Y position to a specific value "on the ground." The actual Y value won't be constant, because different sized objects will have different Y values due to their Origin Handles. However, all objects will be touching the ground, and won't be below it, the ground being Y level 0.

The [C] button only appears when selecting a group containing a Positive object. When pressed, the group is converted into one Neutral mesh. This can be helpful when dealing with a lot of booleans, as it can prevent group clutter.

However, groups converted to meshes aren't rendered with math, like spheres, so some object faces will be visible; the object won't be perfectly smooth, although the edit tab (the [E] button) allows you to change the smoothness of a mesh.

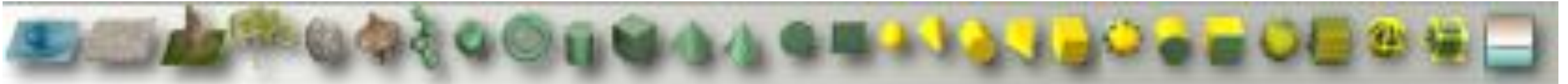


Once a group is a mesh, its individual objects can not be individually moved.

Features: Mass Selection (Selecting All Objects)



If you want to select, say, all lattices in your scene, then look no further than the line-up of objects in the bottom right!



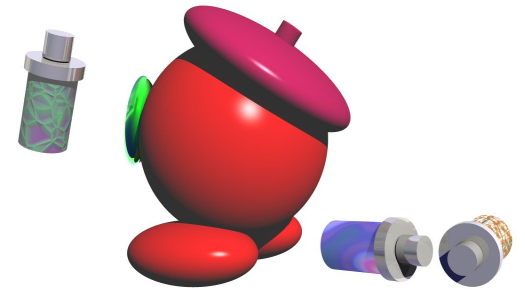
Clicking any of these buttons will select every object in your scene that, well, is that object.

Note: The water plane is actually selecting Volumetric Slabs. The weird gradient to the far right is selecting Families; a drop-down, or rather drop-up, will appear with every family in your scene. Selecting a family will select every member of that family.

Selection via this method works exactly the same as selecting an object in the viewport. Shift to add or remove from your selection, Ctrl to select a specific object out of that group. The only difference is, instead of referencing every object your mouse is over, it references every object of that type.

Of course, Ctrl + A also selects every object in your scene. However, this includes every type of object, as well as the camera, so it's sort of a nuclear option unless you don't have many objects to begin with.

Features: My Bryce (The Customization Options)



The customization options, conveniently and accurately to the right of this page, are less customization and more random stuff that doesn't fit into the Create and Edit tabs. Most of these are pretty minor, so this page will only have a summary.

Demo Pen lets you draw on your desktop (yes, desktop, not just the viewport or editor). Spray Rendering lets you draw your scene (your scene renders on the blobs created with the tool). The expand tool changes the editor from being the size of your computer screen to the size of the scene's resolution. Bryce 7 doesn't seem to change (or even let you press the button), but the proper effects occur in Bryce 3. Background Paper lets you change the background of the viewport, specifically the texture and colour. Nano Editor enables and disables the nano editor, a small view of your render that pops up when rotating. The main viewport will not rotate if this is enabled.

Plop Render lets you drag a space on the render screen to render only that part. The whole render doesn't need to be finished for Plop Render to be used, although rendering has to pause. Depth cue changes how transparent objects become when they get far away from the camera. Shadows enables and disables object shadows in the viewport. Underground enables and disables the green line in the viewport which shows the horizon. It also hides objects underneath the horizon in the editor, so it acts like a floor.



Features: The Rest of “The Rest of the Features”



The Resolution button isn't what it seems. In short, it controls how objects appear in the viewport when they are Static, Selected, or in Motion. This is helpful for cluttered scenes that lag a lot. Auto LOD, or Auto Level-Of-Detail, will automatically change the resolution of objects if the scene becomes too laggy.

The Zoom In, Zoom Out, and Drag controls are self-explanatory. They zoom and drag the camera view in a 2d way, being that the camera doesn't move unless dragged, and when dragged, it only moves on two axis.

Finally, the Display Modes. The three default display modes (the ones toggled between by simply pressing the wireframe cube) change your scene from showing a wireframe version of your scene, the last render done, and both on top of each other.

The other Display Modes render your scene in a low quality, which allows you to see the textures and a rough look of your scene. It's comparable to Blender's Material View mode. There are also options that show shading instead of textures.



Background is “Autumn Morning”

Features: Sky and Fog

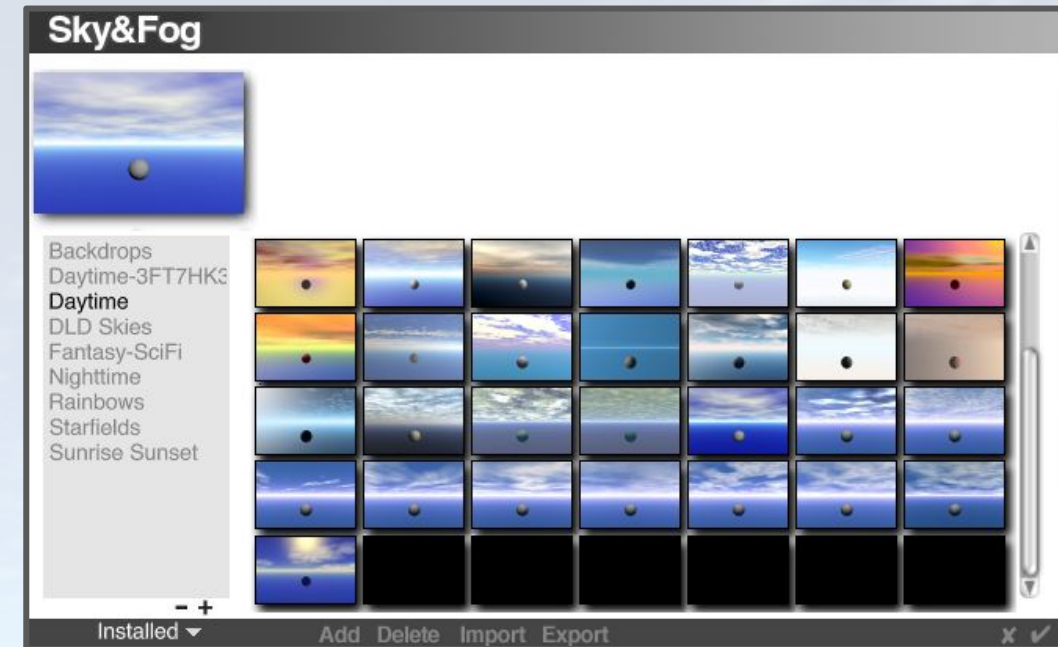


The next few pages regard the Sky and Fog tab, the last tab in the editor! It handles skies, and fog, but mainly skies. Honestly, I’m not really sure why it’s called “Sky and Fog” when there is only 4 settings regarding fog, or 8 if you count haze as fog.

Pressing the grey arrow next to the Sky and Fog tab brings up the Skies menu (or... the “Sky&Fog” menu...). This contains a heap of skies for you to use. Some are much better than others (The Fantasy tab is home to a few stinkers, although that’s kind of the point), but most of them are great.

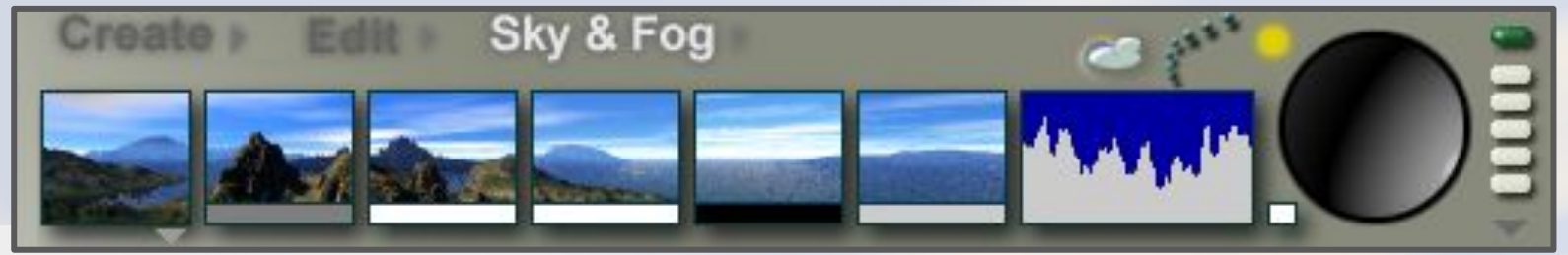
Don’t feel discouraged from using these! Some skies like Autumn Morning, Blue Jeans 3, and Realism Achieved are really good!

However, if you want your own skies, you’ll need to take a trip to the Sky Lab.



Background is “Blue Jeans 3”

Features: The Surface



On the Sky and Fog tab, a couple of options appear.

Sky Mode changes the sky's brightness and colour. You can also turn the sky into a flat colour. When selecting “Custom Sky,” the colours, in order, change the Sun Glow Colour, Sky Colour, and Horizon Colour, which are all exactly what they sound like.

Shadow Intensity and Colour changes the opacity and colour of shadows. Fog Height (which is actually Fog Density and Fog Thickness) and Fog colour change the intensity and colour of the fog. Haze Intensity and Colour changes the colour and intensity of the haze, which is the part of the sky at the horizon.

Cloud Height changes how high the clouds are, effectively scaling them up or down. Sky Dome Colour changes the colour of the objects of your scene, applying a hue. Cloud Coverage and Cloud Colour change the density and colour of the clouds.

The weird blue and white graph is the controls for the frequency and amplitude of the clouds, or the amount and density.

Features: Still up in the Clouds

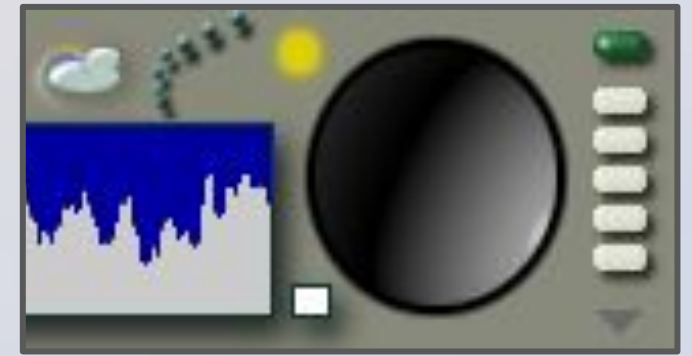
But wait! There’s more!

The little white square changes the Sun Colour, which adds an extra tint to objects in the scene. When it’s white, no extra tint is added and every object retains its regular colour. This is a sort of dumbed down summary of what a change in Sun Colour does.

The big sphere-like option controls the position of the sun. By extension, this changes where shadows appear. Moving the circle too much will switch the sky from Day to Night and vice versa. This changes the sky colour and brightness of the sky and scene. Changing from Day to Night can also be done by pressing the Sun icon (the yellow circle), which turns into a Moon if the sky is in Night mode.

The slots on the side of the Sun Control acts the same as it does with the Camera. It allows you to save and load skies, and reset the sky by pressing the top green button.

The group of dots next to the Sun icon randomizes every sky property, effectively giving you a random sky. Most of these are pretty ugly due to their random nature, but some can look good!



Background is the Default Bryce Sky with the sun moved.

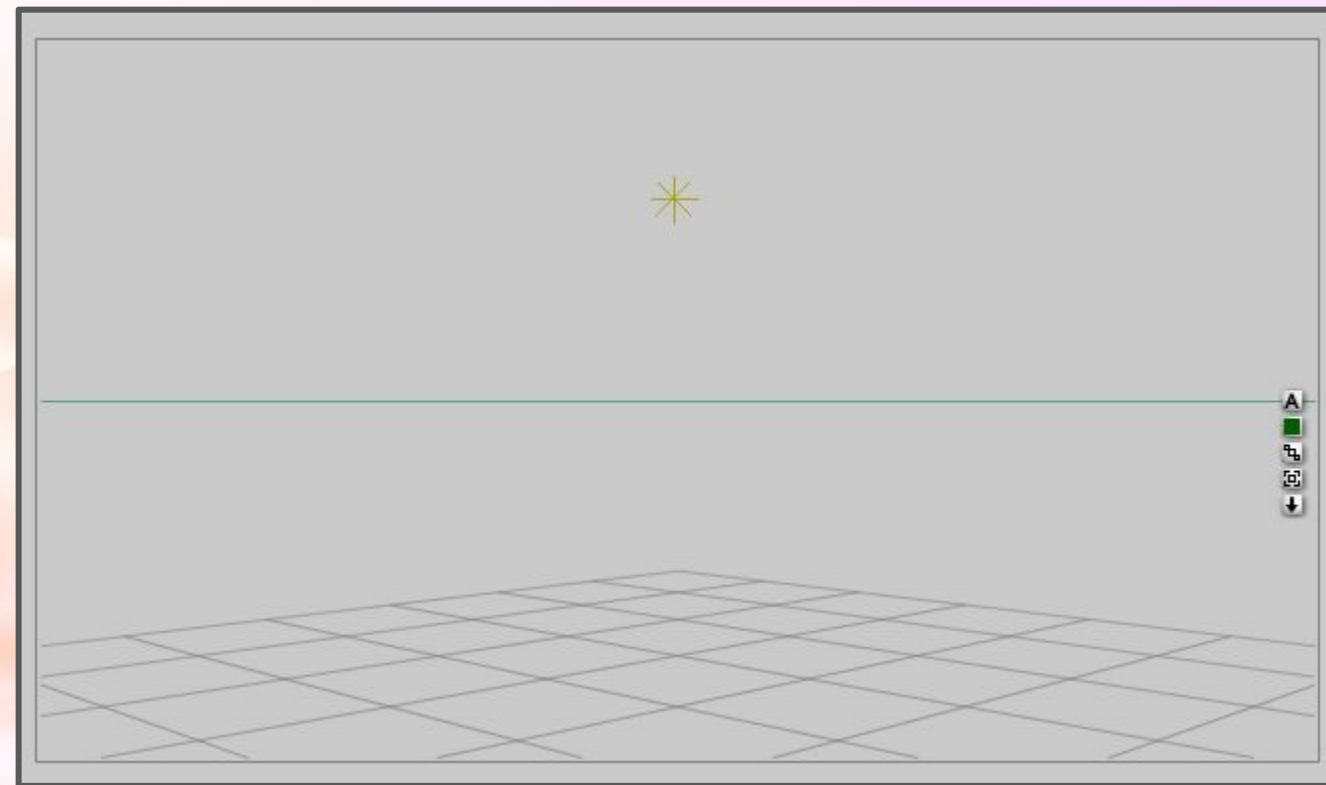
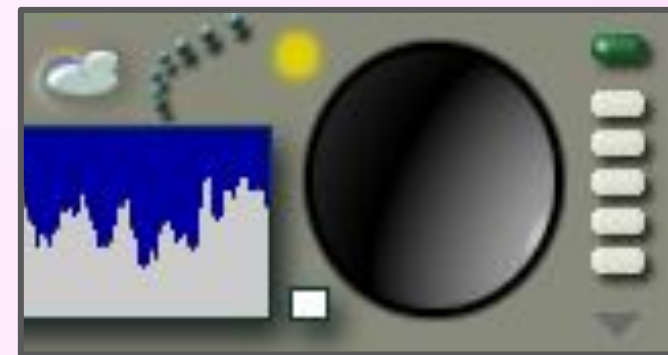
Features: Taming the Sun

If you need more precision and perspective when positioning the sun, there is an easier method.

Double click on the Sun Control while holding Ctrl+Alt. Then, Ctrl+Alt click anywhere on your scene, and the sun will be positioned there.

If done correctly, a small 8-pointed star should appear on your scene. This is where the sun is.

This can help greatly, as it provides much more perspective and context than entering values or dragging the Sun Control.



Background was randomly generated

Features: Reaching into the Heavens

But wait! There's *still* more!

The grey arrow below the sky save states brings up more options. These each have different effects, so the menu acts as a sort of “More Options” menu.

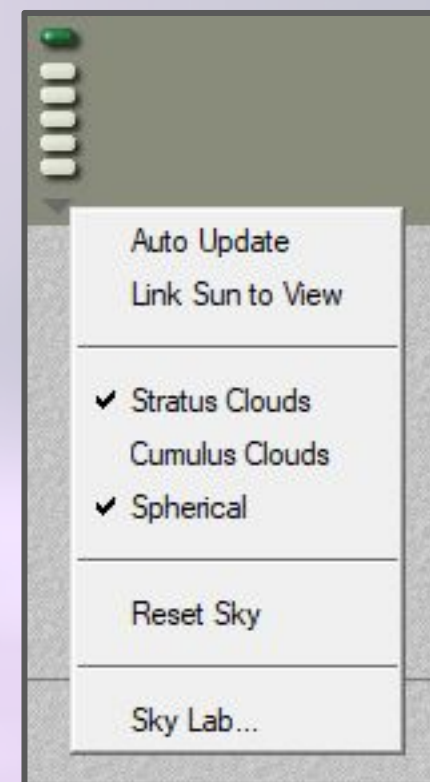
Auto Update will render your scene everytime you make a change to the sky. It's useful when slightly tweaking skies. Link Sun to View is a toggle, and does exactly what it says. No matter what direction your camera is facing, the lighting will be exactly the same.

Stratus and Cumulus Clouds are simply types of cloud layers you can enable or disable. With both on, both layers will be present in the sky.

Spherical changes the way the sky is rendered, specifically its position and wrapping.

Reset Sky resets the sky to the default Bryce 7 sky.

And Sky Lab...



Background is “Wisp O’ the Will”

Features: Sky Lab

Next is the Sky Lab, a.k.a everything just mentioned and more.

There is a lot in the Sky Lab, so most of this will be rough descriptions, especially with topics already mentioned.

To open the Sky Lab, press the Cloud and Rainbow button next to the Randomize button. You can also press Ctrl+K.

The sky lab features 4 subcategories, the first of which being Sun & Moon, which deals with the Sun, Moon, Sky colour, Brightness (or rather Sun Intensity), Shadows, and other Sky Effects like Comets and Halo Rings.



Background is “Autumn Sunset”

Features: Sun, Moon, Shadows etc.

In this menu, some extra features are present. The first is Celestial. This controls the position and angle of Stars, Comets. Moon Phase also affects Stars and Comets, but also changes the appearance of the moon.

Sun/Moon Visible allows the removal of the sun or moon (whichever is present), and also lets you change their opacity and glow. Sun/Moon Size lets you change the size of the sun or moon. Sun/Moon Shadows and Shadow Softness lets you enable or disable shadows, their opacity, and their softness.

Sun Intensity changes the brightness of the scene. Its settings are similar to that of a light object.

Ambient and Sky Dome Colours change the Diffuse and Ambient Colours of object in scene.



Background is “Star Glow” with a random Celestial Field and increased amount of comets and stars.

Features: Halos, Comets, and Stars



If you want more pizzazz to your night sky, there's always Stars, Comets, and Halo Rings! You'll need the Celestial option to be enabled for the first 2 to appear.

Stars appear as little frantic dots in the sky. You can change how many there are and how bright they are.

Comets appear as coloured cones in the sky. You can also change how many there are and their opacity.

Halo Rings add a big ring around the sun or moon. You can change their size, opacity, and add another ring.

These are all great additions to a night sky, but they're also a bit finicky. Sometimes, stars and (especially) comets won't appear in the sky, and all effects are only visible in a dark sky, and are barely visible in a bright sky.

However, when the *stars* align, you can make a great scene with a spacey, even sci-fi feel!

Background is “Texas Sky”

Features: Cloud Cover



The second subcategory is Cloud Cover, which deals with clouds.

As a small note, Stratus and Cumulus are simply different classifications for clouds. Stratus clouds appear more like a flat sheet, while Cumulus has more mass and density, in that it isn't flat. But I'm not cloud expert.

When looking at the menu to the left, you can see the Stratus cloud controls are the exact same as the Cumulus, so each control will only be mentioned once.

Also, the grey and white graph from before that controls the frequency and amplitude of the clouds controls both Stratus and Cumulus clouds.

Apart from appearance, the only difference between Stratus and Cumulus is how certain settings change values (such as changing the amplitude and frequency a different amount for either), and that the setting Cumulus Cloud Colour has no effect on Stratus clouds.

Features: Cloud Cover

Starting off, we have the orange button next to “Stratus” and “Cumulus.” This enables and disables the clouds of that type. The image below both the word and orange button acts as a texture to the clouds, and it tells the clouds how to generate. The two white (+) and (-) symbols distort the texture, and the two blue (+) and (-) symbols zoom the texture in and out. Edit brings you to the Deep Texture Editor, where you can edit the cloud texture, and Reset reverts the texture to what it was before it was edited in the Deep Texture Editor. The sliders are self explanatory.



Cast Shadows controls if the clouds should produce a shadow. Link Clouds to View makes the clouds appear the same, no matter the camera angle. Fixed Cloudplane prevents the clouds from changing appearance when the camera is higher. Spherical clouds, as mentioned, gives the clouds a spherical, puffier look.

The circle with -/+ X and Z, and both values under Cloud Motion controls how the cloud should act when animated. The circle controls its direction, and the speed and turbulence control... well... you get it.

Background is “Golden Day”

Features: Atmosphere

The third subcategory is Atmosphere, which deals with Fog, Haze, and atmosphere (crazy, right?).

The Fog and Haze settings are the same as before, but now there’s also a button to disable and enable them. Colour Perspective fills the sky with colour. When all 3 colours (RGB) are at 100, the sky is completely opaque with no features, and will become the colour of the haze.

Rainbow adds a rainbow! You can change the radius and opacity of them, and even add a double rainbow. Depending on the sky, they may appear faintly or out of camera.

Blend with Sun changes the brightness of the sky to change the further it is to the Sun. The sky will appear as a gradient, with different brightnesses depending on distance from the sun. There are options to change the colour and luminance of the effect, as well as making haze and fog blend as well. Volumetric World makes lights appear as light sources and rays.



Background is PolyHaven's "Table Mountain 1 (Pure Sky)" HDRI

Features: Image-Based Lighting (HDRIs)

HDRIs can be used in Bryce if you want a *really* realistic sky. Of course, you need to make or download HDRIs before-hand. Websites like PolyHaven have free HDRIs for download.

In short, all of these objects relate to the current HDRI being used. They're all pretty self explanatory, but some aren't so much.

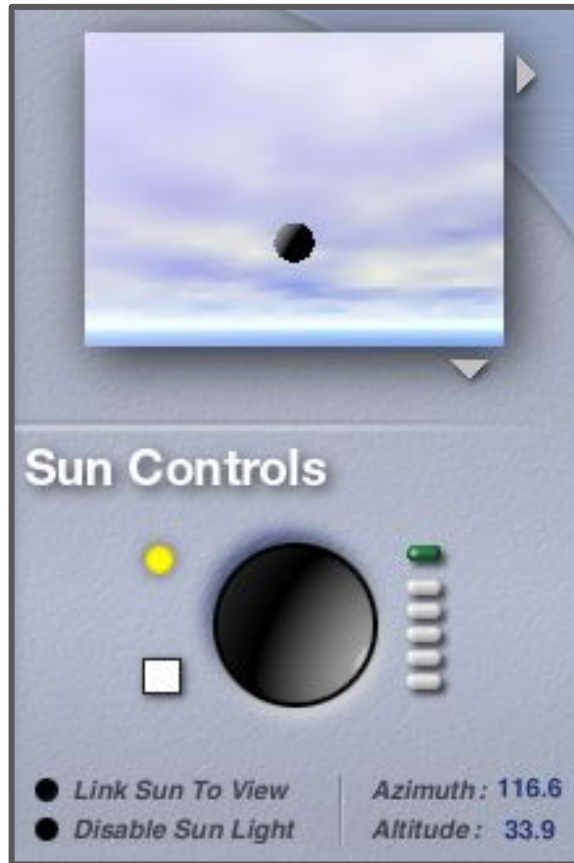
HDRI Effect just changes the intensity of light, similar to the intensity setting on a light object. It only affects objects.

The Use Sky button next to Sky Dome only allows you to create HDRIs using the current sky.

HDRIs aren't a breeze, nor are they as easy to manage (or obtain) as regular Bryce skies. However, you can achieve stunning renders when HDRIs are properly utilized.



Features: Skylab's Viewing Quarters

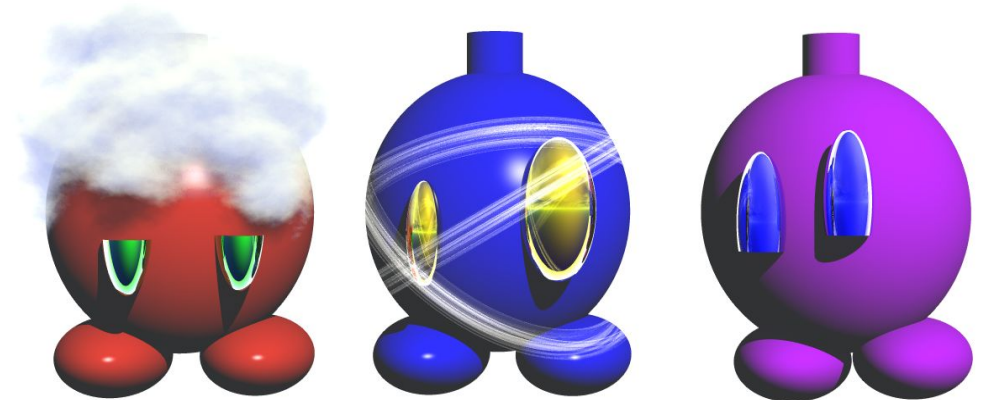


A viewing section will always be present when in the Sky Lab. It contains a small preview of your scene, as well as some controls previously mentioned.

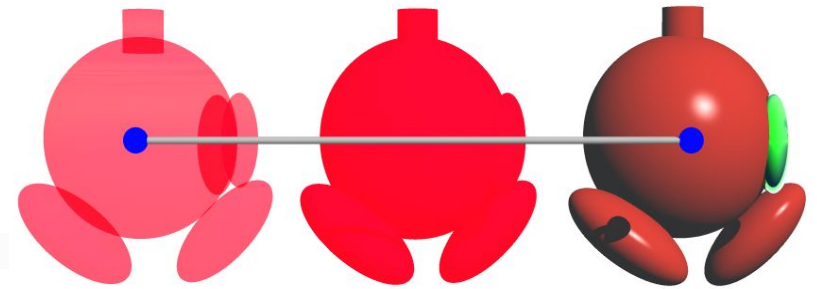
The grey arrow on the top-right of the preview opens the Sky&Fog menu, allowing you to switch to other skies in the library.

The grey arrow on the bottom-right lets you control the preview. You can change the preview to render your actual scene, rather than your sky and a sphere only. There are also options to change render quality, as well as an option to add ground to the render.

And that's everything the Sky Lab has to offer! The only thing left is to open Bryce, go to the Sky Lab and tinker around to produce a beautiful skyscape!



Features: Animating in Bryce



Bryce is capable of animation. It's pretty primitive, and doesn't have anything like Rigging or a Motion Editor, at least not in the traditional sense. Animation in Bryce is done with Keyframes, or set values at a specific time. Bryce will linearly animate your object from one keyframe to another, but, of course, we can change that using Bryce's Advanced Motion Lab. You can also use Paths, which are premade tracks that dictate the movement of an object, and you can create your own tracks.

To start, let's change the bottom Mass Selection palette to the Animation palette. Click the Palette Toggle at the very bottom-right of the editor. The buttons at the bottom should appear. The 6 empty slots are time saves. Click them to instantly travel to a certain time. The film reel is the Animation Preview, which renders each frame in low quality for a preview. The 6 timescale controls do what they look like. The + and - beside the key are to add or remove a keyframe. Holding down on either will let you add or remove a specific timeline, like Position only etc. The key changes if there is a keyframe on the current frame. The sine graph brings you to the Advanced Motion Lab. The grey arrow lets you change the tickers on the timeline, enable autokey, and lets you change other time-related things.



Features: The Key (and path!) to Animation

To see the effects of animation, put a random object on the scene and add a keyframe. Then scroll through the timeline using the bar at the bottom of the editor. Now, move the keyframed object in away way you like. Scale it, rotate it, whatever you want. Then keyframe again. Now skip back to the start and press play. Your object should be moving!

That's the absolute basics of animation in Bryce; two keyframes at different times will transition from one to another over a period of time dictated by the distance between the keyframes.

The same idea applies to Paths, but with a bit more setup. Link an object to a track, and its position will be locked to the path (it can not move to a spot off the path). Then do the exact same thing as above. The object should go from one position to another, using only the path.

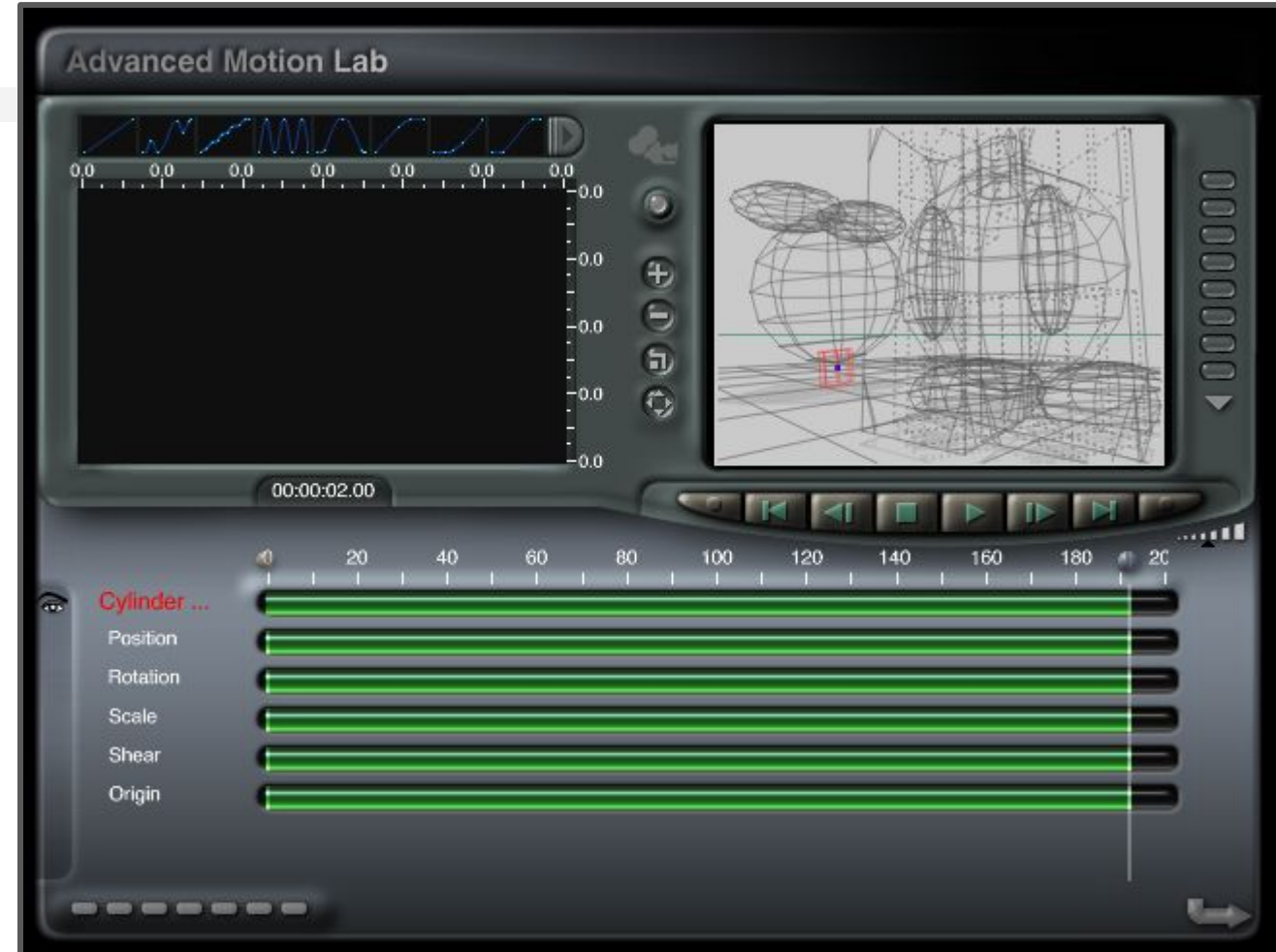
If you want to make your own path, you can select an animated object and go to Edit > Create Path or press Alt+P.



Features: Advanced Motion Lab

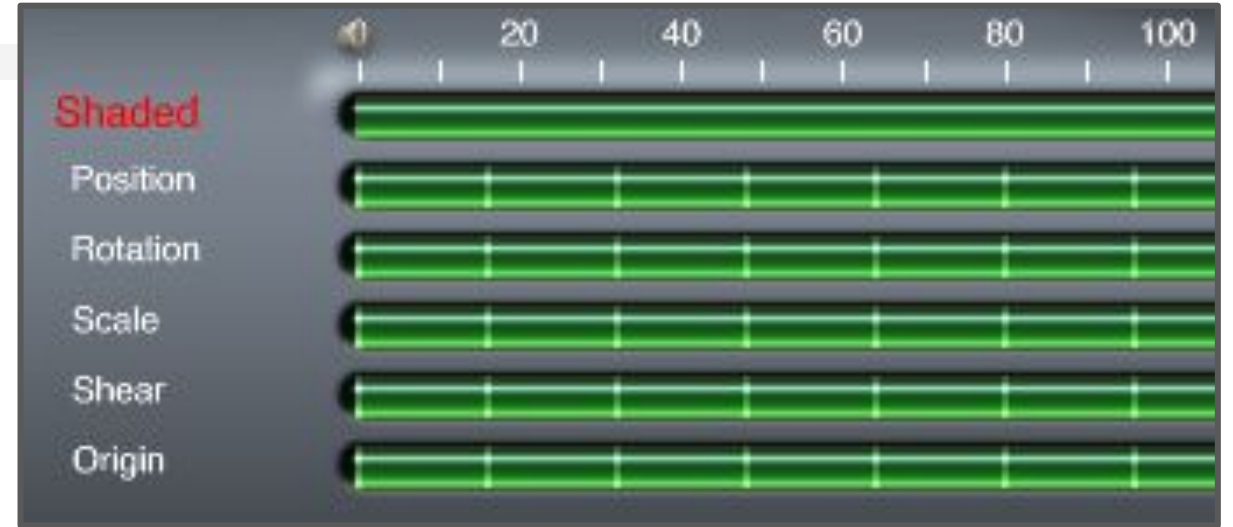
However, if you want to have advanced motions, you'll need to use the motion lab. This is where you can change the position of keyframes, duplicate keyframes, and change how an object should transition from one keyframe to another.

It also has some camera controls. The button below the camera icon is to toggle between Director's View and Camera View. The + and - are to increase and decrease FOV. The last two icons are to reset the camera and to adjust the camera angle. All of these changes only affect the preview. The actual camera won't be modified.



Features: Timelines and Keyframes

The bottom half of the AML shows the object and their timelines. The timelines will only be visible if there are keyframes on them, and if the parent object is collapsed. Objects can be hidden in the preview by using the eye next to their name.



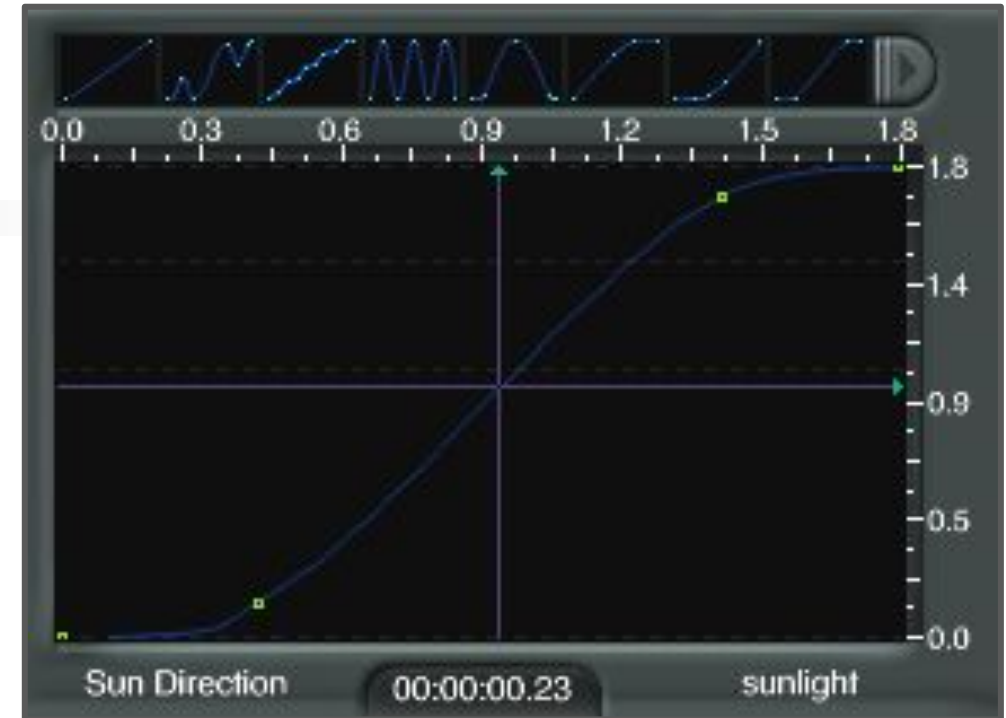
Keyframes are represented by a bright line on the timeline. The numbers on the number line above them show which frame the keyframe is on. The grey circles on the numberline are the start and end of the Working Range, which is the part of your animation that is previewed in the Animation Preview.

You can drag to select keyframes, and press Backspace to delete keyframes. Press Ctrl while dragging on a keyframe to duplicate it. While multiple keyframes are selected, holding Alt while dragging with only drag one keyframe.

Features: Motion Graph

The top-left corner has the Motion Graph, which controls how one keyframe should transition to another. How the graph works is as such.

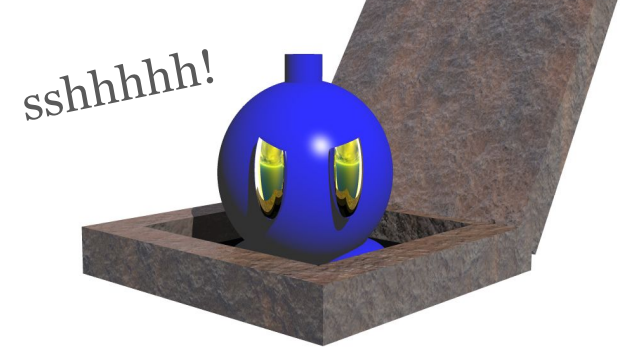
The line moving on the x-axis is the time in seconds, and the one moving on the y-axis is the entire animation, being the first keyframe of the timeline to the last. The current time is where the two purple lines intersect. The grey dashed lines represent the keyframes.



You can change the graph by selecting one of the presets, or by adding more points (the green squares) to the line. To do this, click anywhere on the line. You can Ctrl+Click on a point to delete it. Shift+Clicking on a point changes how it eases to another point. Alt-Clicking anywhere on the graph shows a linear version of the line.

You can zoom in by dragging anywhere on the graph. Shift-Clicking will zoom in or out until the graph is reset to its normal position.

Features: Bryce's Secrets



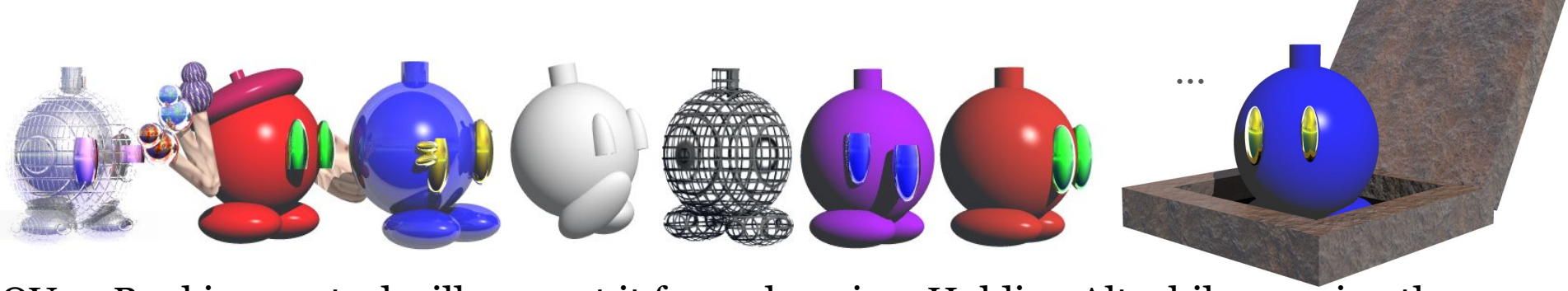
You know how I mentioned that Bryce 3 has various object presets, and Bryce 7 doesn't? Well, that's not true!

Click on any primitive while holding Ctrl or Shift, and you'll get an alternate version of it! This goes for nearly everything in Bryce; hold Alt, Shift, or Ctrl to get something different. For example, the menu in the Edit tab that lets you replace your selection with a specific object. Holding Alt will replace the object, but the new object will be normally sized as if created from the create menu.

Holding Alt while adding a tree button will bring up a list of tree presets not found in the normal presets menu. Holding Alt while adding a light will bring up a prompt for a light gradient. Holding Alt while adding a terrain will instantly bring up the Terrain Editor.

Holding Alt while pressing the main Render button will render the scene as an Animation. Holding Shift while pressing the main Render button will bring up the last render. Holding Ctrl while pressing the main Render button will render in fast mode. Holding Ctrl or Alt while dragging the Trackball will move the camera only sideways or up and down respectively. This also applies to the camera move controls.

Features: Alt+More



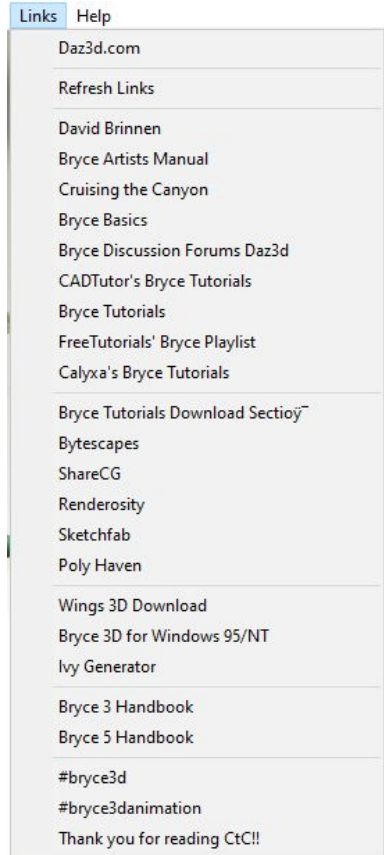
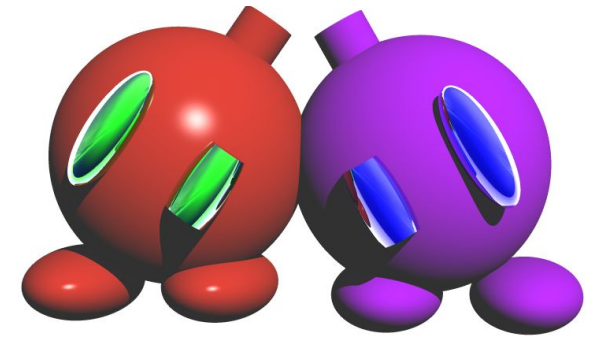
Holding Alt while dragging the FOV or Banking control will prevent it from changing. Holding Alt while pressing the Select Views control will change the camera back to the Director's View. Holding Ctrl while in Flyaround mode will let you change FOV. Holding Shift while in Flyaround mode will slow down the spinning and let you control it.

Holding Alt while clicking on the Zoom In, Zoom Out, or Drag controls will reset the camera. Holding Ctrl while clicking the Depth Cue will toggle between the normal Depth Cue and the maximum depth cue. Holding Alt while using the Scrub Time control lets you move the time in your animation without the viewport changing.

Holding Alt while clicking any of the controls on the Sky&Fog will disable them. For example, Alt+Clicking Shadow Intensity will disable shadows, Alt+Clicking Fog Height will disable fog, Alt+Clicking Haze Intensity will disable haze, and Alt+Clicking any of the cloud controls will disable clouds. Alt+Clicking any colour control in Bryce will bring up a colour slider for more control. The pop-up allows you to swap between an Red Green Blue, Hue Saturation Value, Hue Lightness Saturation, and Cyan Magenta Yellow slider set.

There's probably even more secret added controls in other sections like the Material Lab and Sky Lab, so play around with it! Where there's a button, there's a cool unique thing that happens when Ctrl, Alt, or Shift clicked.

Features: Utilizing Links



The Links tab at the top of the window contains links to helpful Bryce resources. However, since most of these links lead to Daz's website, and because Daz doesn't really support their Bryce related websites apart from the shop listing and some other examples, these websites don't work.

However, you can change the links on the menu, and there are instructions to do so directly on the Links menu.

I have made a custom file containing a load of resources for Bryce. This includes tutorial websites and youtube channels, places for assets, programs for Bryce like Wings 3d, and even links to the #bryce3d hashtag on Instagram, if inspiration is running dry!

[It can be downloaded here.](#) Just replace the "Bryce Links.txt" file with the download.

Even if you don't want to use it, I'd really recommend checking out some of the links in the file, especially the tutorials, and *especially* David Brinnen's youtube chan



Segment 3

The theory of Bryce

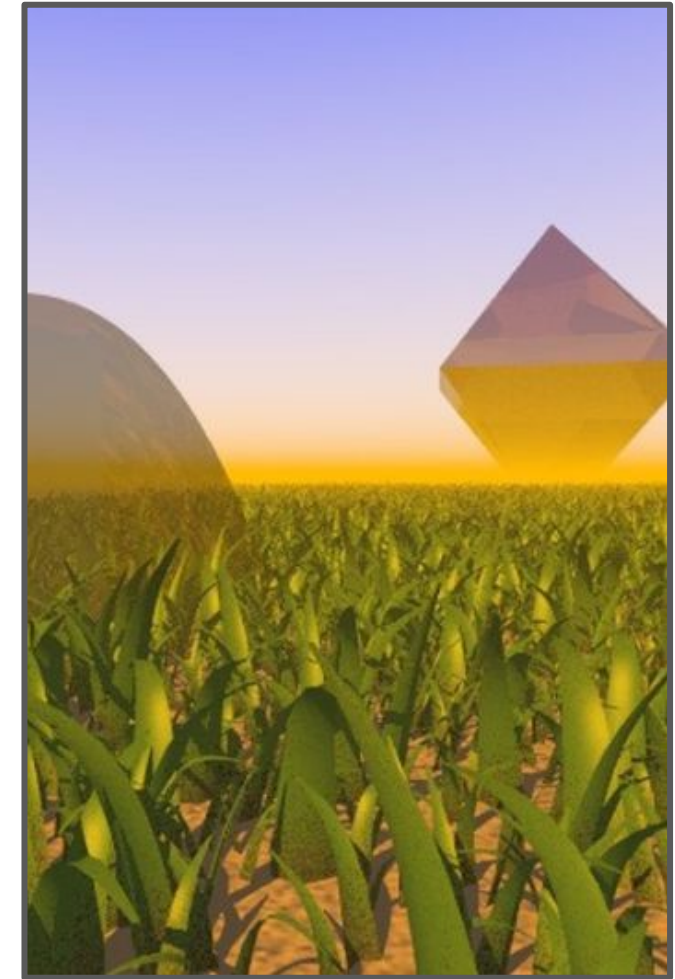
Why do people Love this Artstyle?

It's a genuine question. Why?

Well, I believe there are a couple of reasons, one of the main ones being Nostalgia. Most people have at some time have witnessed art that looks like the art made using Bryce. It unlocks memories past! Whether it was an old game with smooth but primitive graphics or a wacky image on the back of your Trapper Keeper, you've seen it.

Another reason may be appeal. In a time where computers can produce something that could convince one it was real (not even with the use of AI, mind you), it's good to see something blatantly old and computer-crafted. Also, as mentioned at the beginning of this book, the style of Bryce is too good to be ugly. Obviously it is possible to make something unpleasing with it, but the artstyle allows more things - things that a realistic render would prohibit - to slide.

The “Bryce Artstyle” or “Aesthetic” or “Y2K Graphic Style” or whatever you want to call it will always look good and nostalgic unless the artist has purposely worked against that. Or at least that's what I believe.



A render by [@pyrmoboid](#)

...what now?

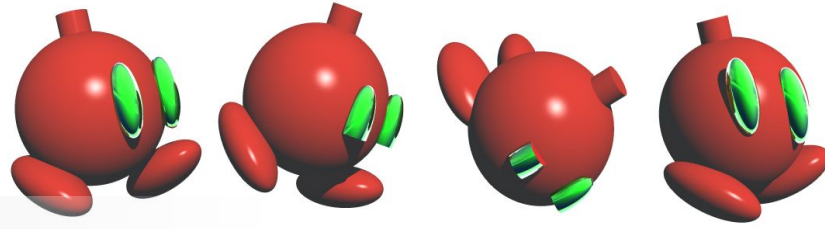
You've got a basic but powerful tool to create beautiful renders (Bryce, of course), as well as a target audience to that (people who are into the style). Now, you can begin, but remember this golden rule: if applied correctly, the renders in Bryce (and old-looking renders in general) can be used for anything. Pretty unoriginal, but it's true.

But specifically, what can you do with Bryce? Well, this next section talks on just that, or specifically how to use Bryce for **Animation, Game Making, General Art, Covers and Poster, and everything else!** In addition to that, some tools, Bryce alternatives, and other things will be mentioned. Of course, the uses for Bryce is not limited to the things in bold. This section is filled with examples of the concepts mentioned. Hopefully they provide to you examples of the concepts being used to their greatest potential!



"icbwiao" by [@nakavelli](#).

Animation



A frame from my animation “Candy Strands.”

I’ll only touch on this briefly, but you can do a lot in terms of animation in Bryce. Shorts, films, shows, you name it! If you have the drive, patience, and perseverance for it, you can do it, and that generally applies to everything in life.

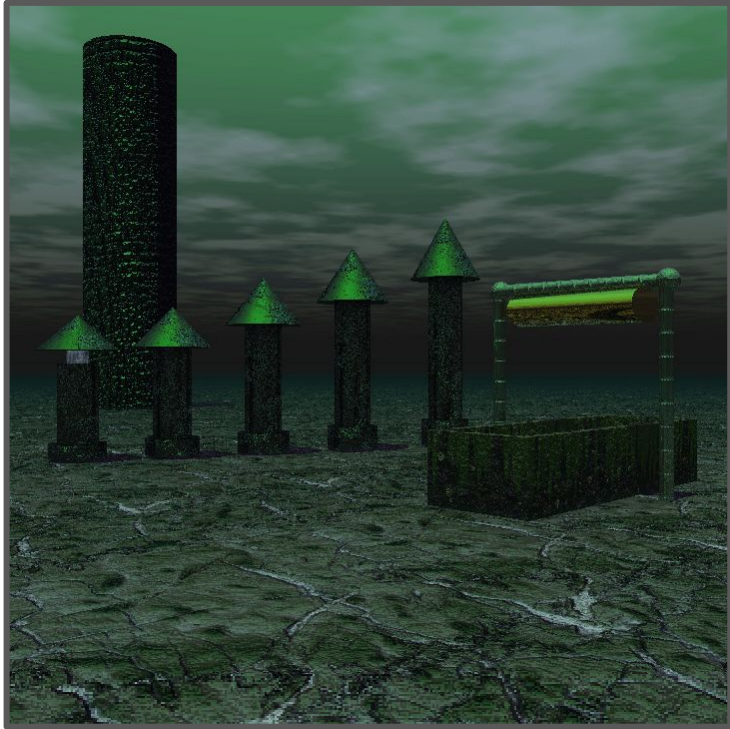
However, there are no rigs in Bryce! This is an issue, as it limits what you can animate... or does it?

Yes, you can rig in Bryce. It has to be done manually, but it sounds harder than it is. Simply put, by using the Linking tool, you can create a rig.

If you don’t have a model already, start with the torso (every body part will need to be its own object). Then backarms, forearms, and hands. Hips, legs, feet. Neck, and the head. Then, starting from the object farthest to the torso (foot, hand, head), link it to its nearest body part (link the feet to the lower legs, link the hands to the forearms, link the head to the neck). Then do the same for the rest of the objects until every object is moving when just the torso is moved. That’s a rig, or at least as good of a rig as you can get.



Putting things in Motion



A frame from an animation of mine. It's supposed to be an Animusic style animation.

Remember that the Camera object needs to be used to animate the camera. Also, expect to be waiting a while for renders. Every single frame is fully render.

Also, concerning the characters of your animation. Unless they are made in a different program like Blender and look okay, **NEVER** make a human character rig as your first animation. It's very difficult to get a human looking well when animated. Unless you use metaballs (which has its own issues) the human will look lumpy thanks to the primitive shaped being used. To start, I highly recommend making robots. With robots, you can excuse things like spheres residing in between the fore and back arm.

If you want proof that this has been done well, just search “Bryce 3d Animation” on YouTube. You’ll be bombarded with amazing animation after another.

Game Making

Games like Myst use rendered images instead of rendering a 3d scene. This is one of the main uses for renders like the ones from Bryce. They can act as the scene, or even as a pre-rendered background (like the older Resident Evil games). So if you want to make a game that mainly uses Bryce assets, a point-and-click style game is a pretty great option.

If you need inspiration, check out [@kenopsia.game](https://www.instagram.com/kenopsia.game) on Instagram and their game, which features beautiful and immersive renders (and even rendered animations!).

If point-and-click games aren't your thing, you can always try something else. Off the top of my head, RPGs, Rhythm Games (more like Rhythm Heaven and less like Guitar Hero or a game with the inputs present), Visual Novels, Microgame Collection (like WarioWare), Puzzle Games, and other Story games similar to a point-and-click adventure like KinitoPet could all feasibly be made, and there's probably a lot more!



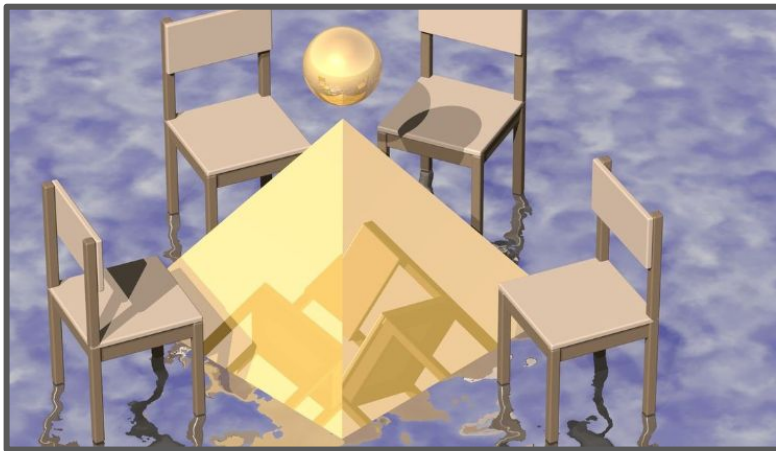
Both renders are from the game Kenopsia, a point-and-click game set in an abandoned MMO. In game, these renders are animated too!



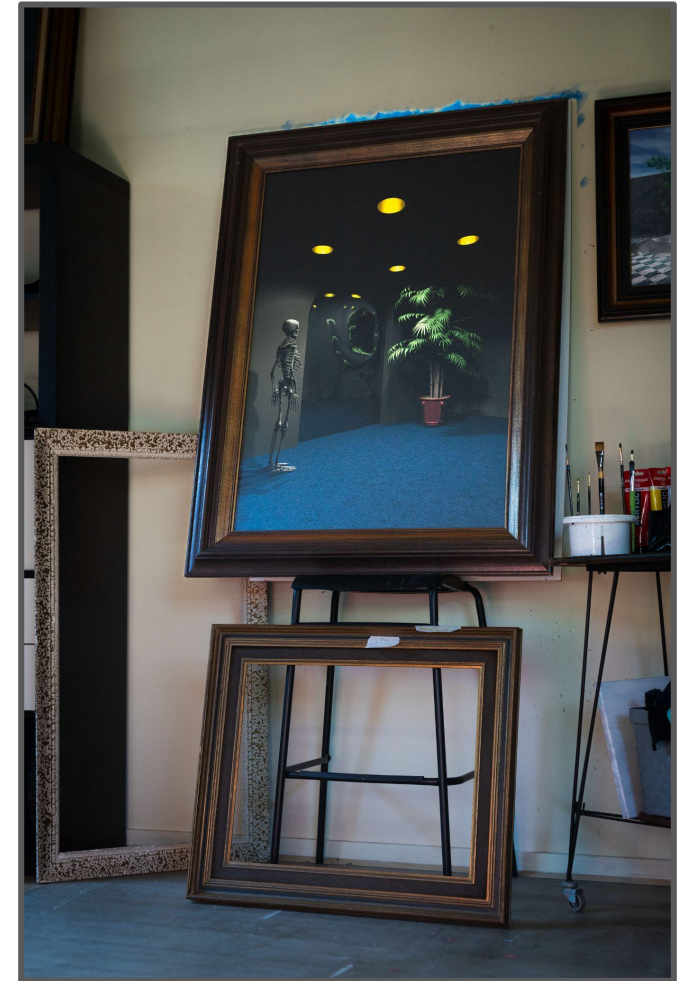
Posters and Covers

When rendering a scene, Bryce presents an interesting value that you can change, being Print Resolution and Output Size in Inches. These hint at being able to use the renders from Bryce as posters, and naturally you could do that!

Covers are also another option. The aesthetic is there, and it's pretty pleasing, so I'd bet Bryce artwork would work well in terms of attracting people. In general, any advertising done with Bryce could attract people depending on the product.



[@pyrmoboid](#)'s piece. It isn't a physical piece, but something like this would look great as a printed poster, and that goes for a lot of things made in Bryce!



[@zerorei](#)'s own framed work. Looks even better in real life!

General Art

Bryce is a tool for making art. It's barely limiting, so you can make whatever you want!

You may want to embrace the wackiness and old look of Bryce by making something more digital and sci-fi-esc. Most of the materials in Bryce (particularly the ones from the Metals and Effects sections) are perfect for a spacey feel!

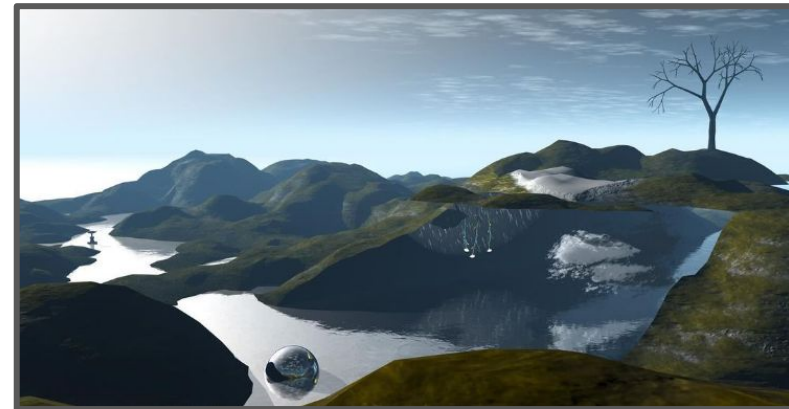
You may also want to embrace its retroness, and lean more into a gaming or computing theme. Perhaps something N64, GameCube, or PS1 related could appear, or even something from the Wii and DS era. Why not?

Of course, you may want to pursue a realistic and natural looking scene. Bryce lets you place trees and rocks, and has powerful tools for clouds and water. Tools like the Instancing Lab will let you place a mass of flowers, or a ton of pebbles. If you are willing to sacrifice some of your time, the end result will be worth it.

Or maybe you don't want to do any of that. That's fine! Create whatever pleases you!



Top is "Comfort" and bottom is "Infestation"
both by [@floatingorb_maxc](#).



Tools to Assist Creation



Bryce already provides some great features, but it's missing a lot. However, with the help of some other programs, you can excel the art you make in it. For example, take the [Ivy Generator](#), a program that allows you to create vines around an imported object. David Brinnen has a great tutorial on how to use it with Bryce.

[@nakavelli's](#) “グランジテープ no text,” which incorporates a strong nature theme.

Ivy Generator + HDRI = Beautiful!
...and long render time...



The Ivy Generator isn't the only software capable of producing 3d models rich with vegetation. I would argue it is the simplest, but there are countless alternatives.

To Poly or not To Poly



A render by [@disillusion.st](https://twitter.com/disillusion.st). Note the choice to not make a hyper-realistic render.

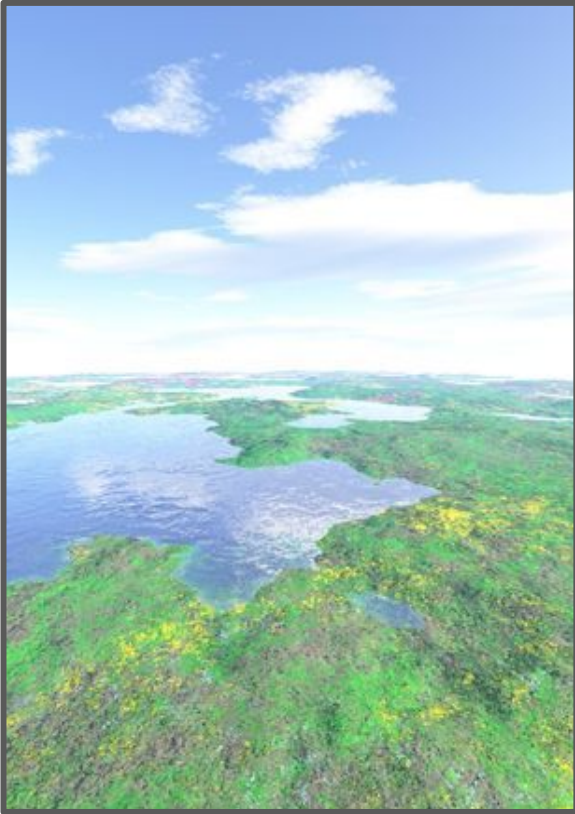
Programs like Blender, Wings3d, and pretty much any other 3d modelling software can be used in Bryce. Objects imported to Bryce can be set to be smooth or not. This is something not possible with regular Bryce primitives, which are always smooth.

Just like choosing whether you render your scene with Anti Aliasing or not, choosing for your models to be more low-poly than smooth is mainly just a stylistic choice.

With tools like Blender, you can also create much more complex primitives, something only possible by grouping primitives in Bryce.

The render on the left demonstrates this well. It is rendered in Blender, and yet it doesn't look realistic, which is intentional. Things like high-poly vs low-poly or anti aliasing vs no anti aliasing aren't a mark of quality but rather purely stylistic decisions.

Bryan (or Bryce Alternatives)



[@zerorei](#) 's "Grassy Field," which was made with TerraGen

Of course, there are some alternatives to Bryce, although rather than “alternatives,” they’re more software that an alternative to one or more specific aspects of Bryce.

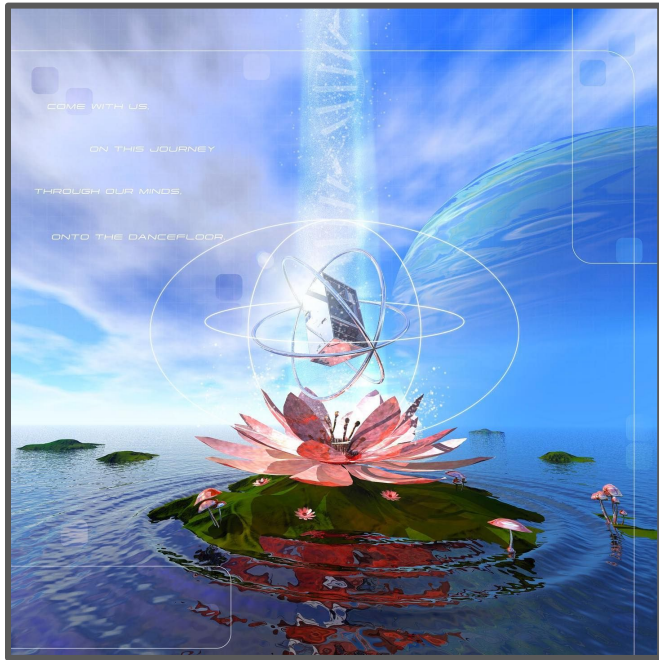
Software like TerraGen and Vue allow you to create absolutely stunning renders, and are still somewhat intuitive, with Vue having a materials lab similar to Bryce. They aren’t as beginner friendly as Bryce, but are definitely worth checking out.

Other software like POVRay allow the creation of renders with a similar style to Bryce (specifically Bryce 3). Again, they aren’t as beginner friendly, but are interesting nonetheless.

If Bryce’s terrain generation is all you’re interested in, there are countless alternatives, such as the mentioned Vue and Terragen, as well as World Machine, Picogen, and FlowScape, with all but Picogen being free to use.

Of course, any 3d rendering program is a substitute for Bryce, even if more effort is required to emulate Bryce’s retro look.

Inspiration

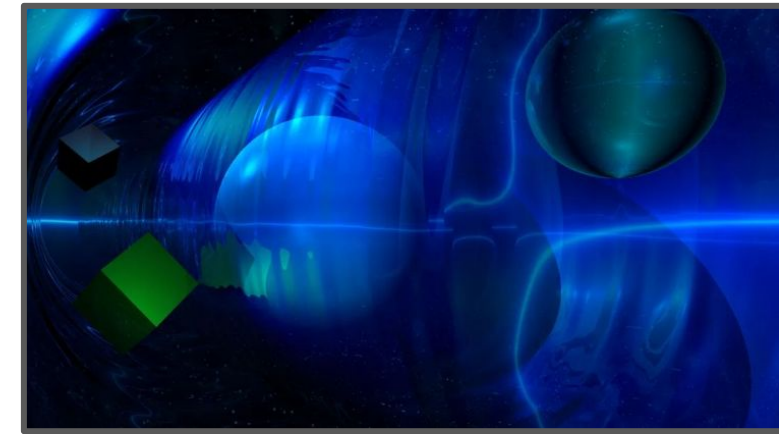


“Reality Check 3” by
[@enigmaworld_org](#)

If you need some inspiration from others, I’ve got you covered.

Check out Bryce content on Instagram, YouTube, and anywhere else you can! Seeing what someone has been able to do with the program could motivate you to try making something on par. Obviously you shouldn’t try to be exactly as good as others, but instead be inspired at what they could do, and try out what they are doing. I know it’s vague, but seeing others’ content is “eye-opening” in a way.

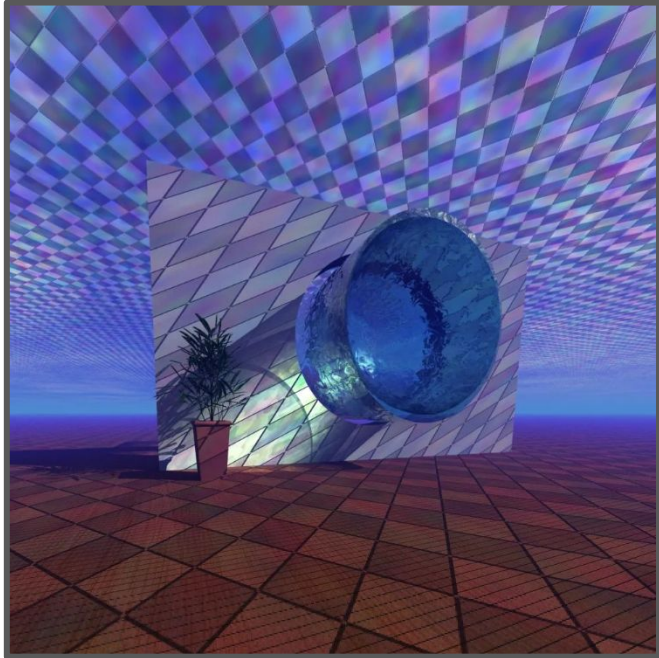
Additionally, check out David Brinnen and Horo on YouTube. They make great tutorials, and everytime I watch one of their videos I learn something new. Amazing, right?



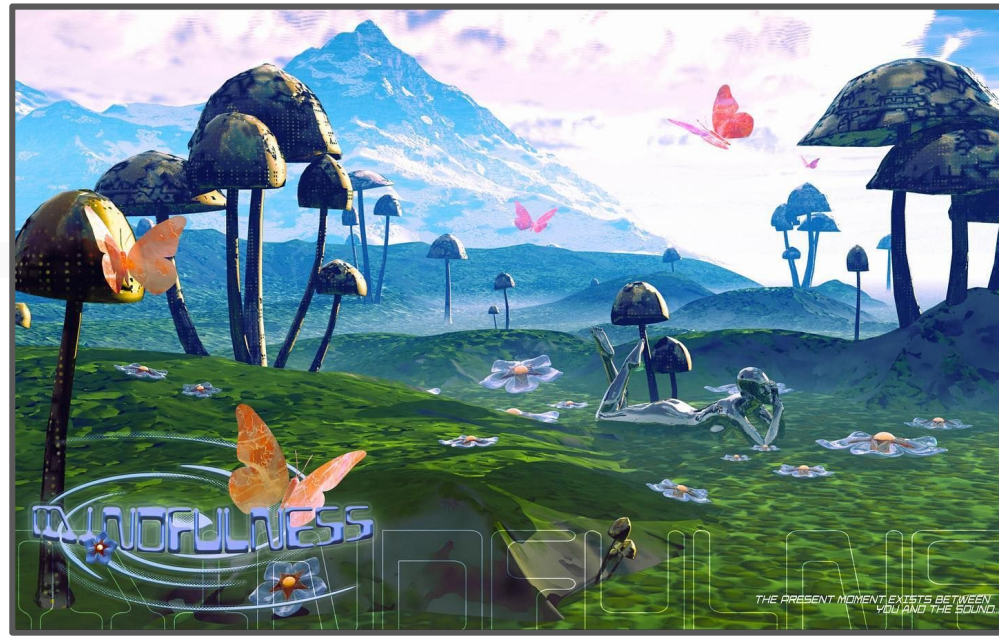
Top is “Plasma Water Tube” by
[@ephemeral_dimensions](#) and bottom
is “Maximalist” by [@floatingorb_maxc](#).



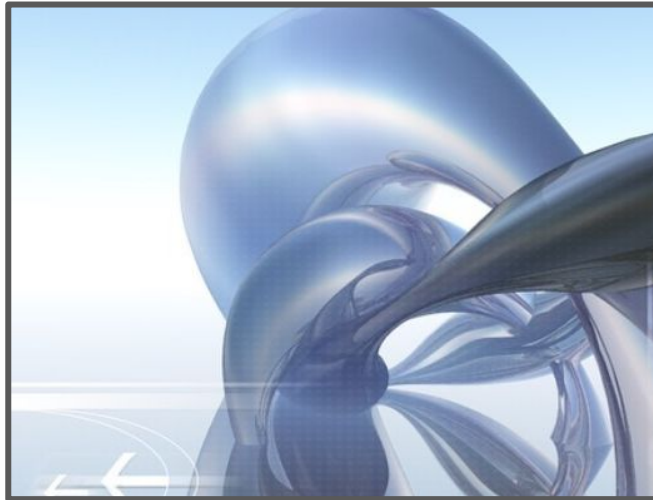
More Inspiration



“Seismic Thirst” by
[@ephemeral_dimensions](#)



A piece by [@enigmaworld_org](#)



Another piece by [@shawtythepimp](#)



A piece by [@shawtythepimp](#)



Segment 4

Ending Remarks

Meet the Artists

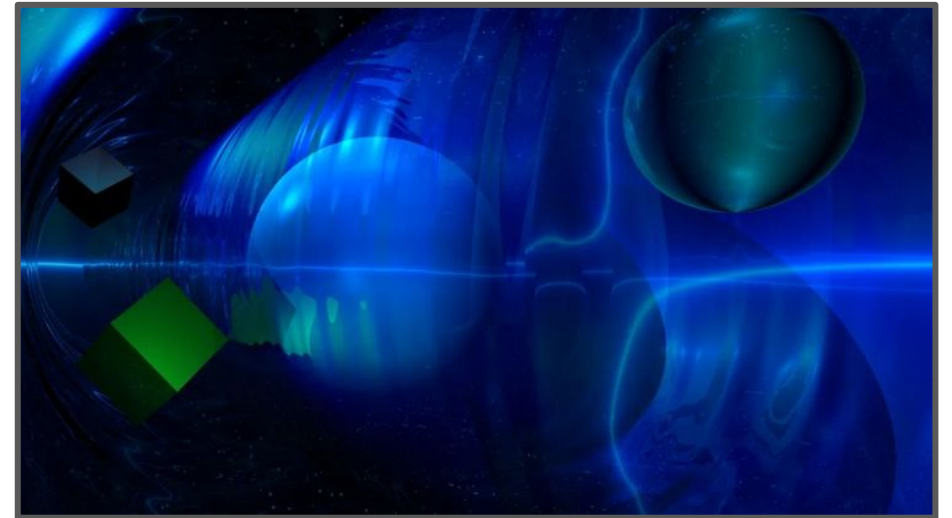
The last section was brought to life by creative and talented artists, who were generous enough to give me permission to use their art as examples! If you liked the art showcased, check out the artists on their instagram accounts, where they post similar content.



Nakavelli (@nakavelli)



Ian (@ephemeral_dimensions)



Meet the Artists



Max ([@floatingorb maxc](#))



STP TV ([@shawtythepimp](#))

Meet the Artists

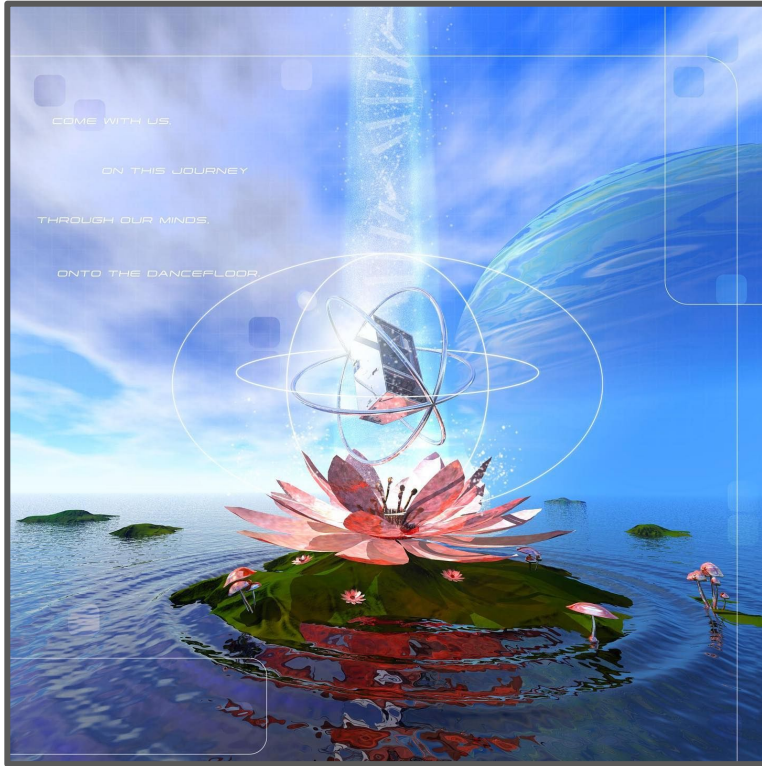


Jamie Norton ([@kensopia.game](https://twitter.com/kensopia.game))



Rick Tempest ([@disillusion.st](https://twitter.com/disillusion.st))

Meet the Artists



André (@enigmaworld_org)



PyrMoboid (@pyrmoboid)



Meet the Artists

As well as providing the Terragen render seen on the right, Zero Rei also reviewed the book as I was writing it, and gave feedback and suggestions, as well as some Bryce 3d feature corrections!

Without Zero Rei, this book may have turned out slightly or very different, and would also contain some inaccuracies, so I'm thankful to have such a Bryce guru editing this!



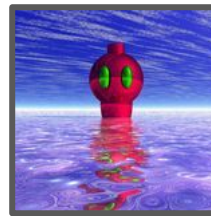
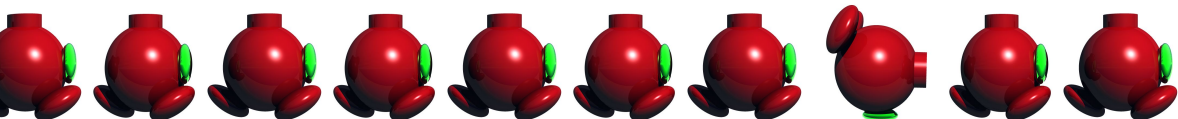
Zer0 Rei (@zer0rei)

Meet Me + Other Notes

I also occasionally make renders too! Usually it's animated stuff, or something else random.

I'm not going to ask you to follow me, but I *will* ask you to share this book around! I would greatly appreciate it!

Also, I plan to keep updating this book with suggestions from you, the reader. If you do have feedback or a suggestion, please let me know by message me on Instagram or commenting on my pinned post!



Super Render 64 ([@superrender64](#))



Parting Words

And that's it, at least for now!

This book has been a while in the making, and after shifting my perspective a bit, we've reached here!

Hopefully I have succeeded in at least teaching you something new, or entertaining you about Bryce. Go forth and making something unique, retro, and beautiful!

