World Egg

by **pixelinabitmap** on October 10, 2008

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Intro: World Egg

First, I'd like to thank Instructables for running this contest: without it, the reindeer moss I picked up because it looked like miniature trees would never have connected in my mind with the idea of putting that awesome-diorama-I-would-one-day-make into an emu egg and getting to work on it immediately. Whatever the proportion of inspiration to perspiration there has to be for a given project, without the inspiration there really is no project, no matter how much perspiration one is willing to put in.

Other things needed for this project:

Emu egg (preferably more than one... I ruined the first and maybe the second)
White vinegar (fresh from the store: the newer it is, the more acidic)
Crayons (good ole Crayola)
Rock mold (this came in a diorama rock kit I bought at Michaels for this, but can be had online)
Plaster
Talus (i.e. little jagged rock crumbs. Unpainted aquarium gravel could do in a pinch)
Gravel (i.e. larger jagged pieces of rock. Jagged is the key word here)
Putty (I used Aves Apoxie Sculpt, but any self-hardening putty-like stuff would do, so long as it sticks well to things)
Reindeer moss (I've seen the same stuff labeled as lichen)
Grass flock (came in another diorama kit, this one for grasses. Can also be had online or in a hobby store)
Foliage fiber (same diorama kit, the stuff looks and feels vaguely like the scrubby side of a kitchen sponge)
Glue (I used what came free with the kits, it smells like Elmer's to me. Any non-toxic, clear drying glue would do)
Acrylic paints
Clear casting resin
Very small twig wreath, or twigs and raffia to make one.

Tools:
Plastic cups, knives, stirrers.
Manicure scissors
Tweezers
Brushes (here it really helps to have a few small and soft brushes, they are best for blending)
Rotary tool with a grinding tip and a small cutting tip.

Also, lots of time, patience, and a clean, well lit work environment (I used my office for a chunk of this project)
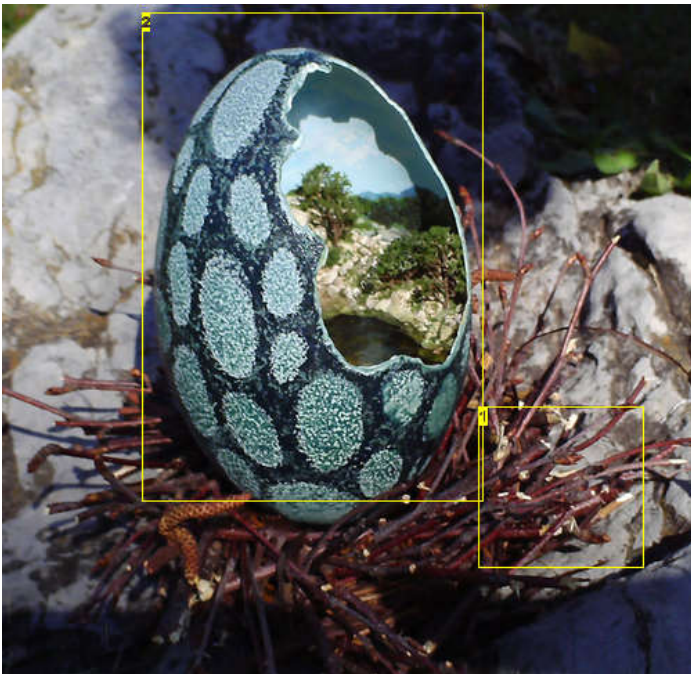

Image Notes
1. The twig wreath.
2. The finished egg.

step 1: Etch the Eggshell

Right away I figured I would need more room for my diorama than a chicken egg. My first thought was an ostrich egg. I went to google images and started looking at what other people have done with them. Then I saw a picture of a large dark green egg, and knew I had to have one. With a little research, I found out that the awesome green eggs were laid by emus, but apparently, they were even MORE awesome than just giant green eggs: it turned out that beneath the dark green layer hid a light teal layer, and beneath that a white layer. That pretty much decided for me just what I was going to do with the egg.

I got four of them on ebay, figuring that, since I haven't done any eggshell crafts since elementary school, and might ruin a few shells before I got one right. I won't go over all of the experiments that finally led me to choose to etch my egg in vinegar, and use a crayon for a resist.

So I got out a crayon and drew the pattern I wanted on the shell: something between irregular spots and what cells look like under a microscope. When I got done drawing, I went over the lines again, really grinding the crayon in, trying to make sure there was a thick and even layer of wax everywhere I didn't want the vinegar to touch.

Then I went to the store and bought a bottle of white vinegar. I once read that vinegar becomes less acidic the longer it's stored, so, even though I realized that what's on the store shelves may have been sitting there for a good year, I KNEW that what was under my sink has been sitting there for at least two, in addition to the time it spent in the store. So fresher was definitely better.

I then used some Apoxie clay to seal the little hole on the bottom though which the egg was sucked out prior to getting to me, put it in as narrow a container as I could find and still fit the egg inside, poured in the vinegar, covered it with plastic wrap, and weighed it down with a handy bottle of liquid soap. About two hours later, I pulled it out, and scrubbed it with a dish sponge under hot water, so the places where the vinegar has been eating away at the shell (and which became soft and slimy to the touch) got scrubbed away to a nice teal.

Now, before I used a crayon for a resist, I looked around for ways to remove it from the shell once I didn't need it (and since I figured the rough texture of the shell might make it difficult to remove ALL the crayon, I used a low-contrasting color). After trying several remedies, it turned out WD40 was the best, and got most of the crayon off.

Upon closer inspection, it looked like some of the spots got etched much better than others. My only guess as to why that happened was that maybe that side was in contact with the plastic wrap covering the container. Whatever the cause, the darker spots were almost blending in, and that was unacceptable, so I got out my trusty dremel, stuck in a cone-shaped grinding tip, and cleaned those spots up. Unfortunately it turned out that while the vinegar ate away at the surface at the same rate everywhere, basically preserving the original texture of the egg (which I really liked), the grinding tip was doing a much smoother job. So I cleaned up as few spots as possible as lightly as possible and let it go at that.

Once I was satisfied that the shell was done, I used the grinding tip to grind a deep groove where I wanted the finished hole to be (to minimize slip-ups when I started cutting), swapped out the tip for a carving/cutting tip with a tiny head, and cut out the hole. I would just like to say that those craftsmen who use rotary tools to do the entire design are real heroes, because grinding at that egg, and especially cutting though it, sounded and smelled just like having your teeth drilled at the dentist's, so by the time I was done, my teeth hurt, and I was breaking into cold sweat.

Image Notes
1. The emu egg, as it looked before anything was done to it.
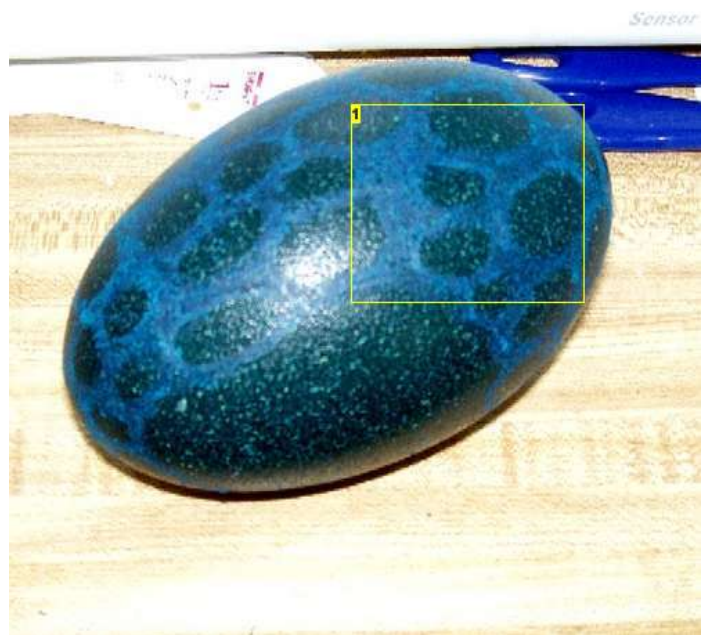2. Dandelion, investigating the newcomer.

Image Notes
1. I was looking for as little contrast as possible, though I still needed SOME to see what I was doing.
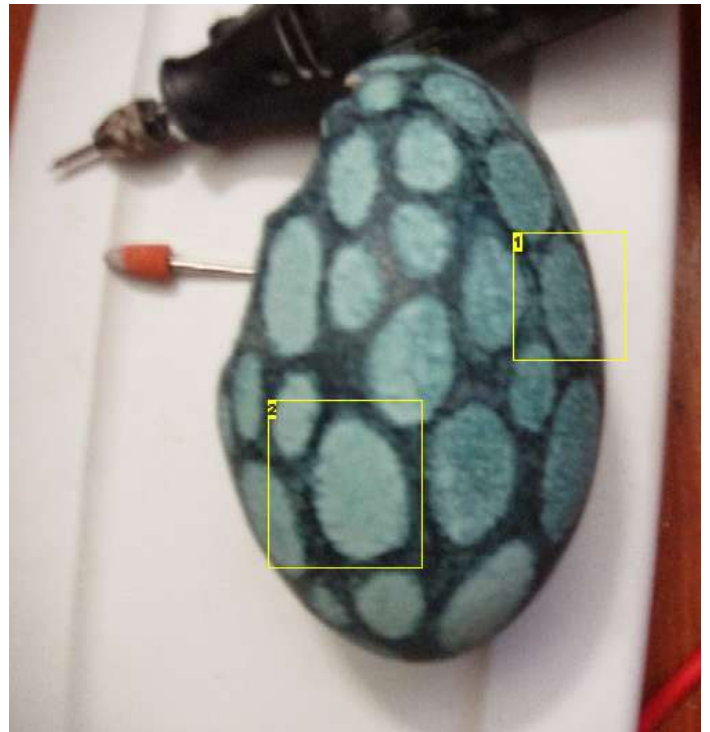
Image Notes
1. A vinegar-etched area.
2. An area cleaned up with the grinder. Note the smoother texture and lighter color.

step 2: Add the Terrain

I peeled the thin yellowish skin covering the inside of the shell. It looked dirty and it was already peeling in places, so I decided my best bet was to get rid of it. That took a surprising amount of time, as in other places it seemed very firmly attached, and had to be rubbed off with fingertips. All this while being careful not to exert excessive force and crack the shell.

While I was peeling, I also used the rock mold from the diorama kit to cast some rocks. This might seem silly, as there's tons of different rocks to be found outside, all for free (while the diorama kit cost me $10). The problem with most rocks outside is, they have been around for a while, and by and large became rounded off and polished up by erosion. Of course, so have most mountains, at least on a small scale -- there are very few jagged rocks to be found on the surface. Except when you zoom out, the surface looks much more jagged, and has complex, fractal-looking formations. Most round pebbles found outside would not help much in approximating the look of large natural rock formations (and finding enough suitable rocks would probably take a long time).

Hence the rock mold -- neatly approximating all the jagged cliffs I want. And the talus, which is just little rock chips -- probably fresh from a quarry of some kind, they haven't had much of a chance to have their surface smoothed by erosion. And the larger rock chips, which I picked up separately at the dollar store (they are the black ones on the bottom) were very convenient for lining the bottom of what would be a lake.

So I got a couple of plaster cliffs, and painted them a surprisingly convincing "rock" color, by following directions from the kit, which suggested that I use the three provided acrylic paints, ocher, brown, and black, water them down, and dab them on randomly at the surface of the rocks with the provided foam brush: first ocher, over most of the surface, then brown, over some of the surface, then black, over even less area. I then did the same to the talus, getting a bunch of matching boulders for my cliffs.

One problem was that the rock mold had no idea I'd be sticking the finished product into an ovoid, so the rocks were rather inconveniently shaped for that. This is where Apoxie clay came the most handy. I mushed a lot of it to the inside of the egg, forming a sort of ridge, and then used it to secure a couple of the rocks I just made. I then snapped most of the remaining rocks into smaller chunks and added them in to form an interesting looking rocky coast. Then I took tweezers, and, one by one, dipped them into glue, and filled in the awkward looking gaps that were left, as well as liberally adding some smaller boulders here and there. Actually I've added more talus throughout the process, to enhance visual interest of the pieces of scenery.

The larger black rock chips I secured to the bottom in much the same way. I've built up a healthy layer of them down there, to get a nice, variegated looking bottom. I didn't add much talus to the bottom until after I painted them though.

While everything was drying in place, I painted a base of baby blue to what would be the sky, to help define the horizon, then, when everything was dry, I actually poured water into the bottom, making sure that the future lake surface would touch (and slightly cover) the bottoms of all the rocks, so they didn't look like they levitated over the lake, and made a few corrections to the coastline and the horizon.

step 3: Grow the Grass

I used another diorama kit, this one for grasses, though I only ended up using some of the items it had. Most of what I was interested in was the two colors of grass "flock". If you look very closely at it, it resembles finely ground up foam, and I would not be surprised if that's exactly what it was.

Either way, the kit instructions suggested I add about 1 part glue to 3 parts water to a little spray bottle provided, then pour the grass flock into the provided shaker, spray down a surface with the diluted glue, then shake the grass over it. Since I didn't particularly want to completely cover my beautiful mountains (which I just finished making and of which I was feeling pretty proud at the moment), what I did instead was to mix a dab of glue with about twice as much water on a palette, then took a brush, made a few dabs where grass looked likely to grow, then picked up a bit of the grass flock on the tip of a plastic knife, and carefully shook it over the places that had glue. I admired my work a bit, added a few more dabs of glue, shook a little flock over them, then moved to another area and repeated the process. What I had at the end was some weathered cliffs, with convincingly sparse tufts of grass growing here and there.

I left that to dry and moved on to making trees.

Image Notes
1. This was the most realistic-looking color.
2. This color was much less useful, even when used as an accent, it looks decidedly odd.
3. The "Foliage Fiber", a.k.a. algae fiber :)

step 4: Cut the Trees

I finally got to play with the moss, which partly inspired this whole enterprise. It smells bitter-sweet, like a forest floor on a sunny day, so working with it was extra pleasurable. I went through the stuff in the bag and pulled out clumps of moss that were harder and less spongy than the rest (some of that was VERY soft, and had no hope of convincingly standing up and supporting its own weight). Then I picked the pieced which had looser texture: those that looked like bigger trees, instead of the tighter stuff, which looked like smaller trees.

What I quickly realized was that while en masse, in the bag, it looked a whole lot like a forest, but when it came to individual trees, I had my work cut out for me. We all know how trees grow: they start at a single stem (the trunk), then that stem branches off, splitting into a few large limbs, then those, in turn branch off, and so on and so forth, until we have a lot of little branches at the top. Well, the moss sure had a lot of little branches at the top, which is what made it look so interesting and tree-like. The trick was hiding down below. The larger, thicker stems at the bottom all branched off, except that after they branched off, those branches merged with the branches coming from other stems, then branched again and merged again, so instead of neat little trees what I had on my hands was more like a three-dimensional lattice.

So out came the tweezers and manicure scissors. The tweezers were mostly for pulling little pieces of needles and dry grass and dry leaves and various other floral junk littering the forest floor (and therefore the moss growing there). I quickly realized that they were not useful for tearing branches apart. What I had to do, was take a large clump, examine it, find places where a few large stems looked particularly tree-like, cut out those smaller clumps, then settle on one or two stems I was going to make into trees, and carefully snip off branches that didn't belong.

When I had a few good trees, I took out the brown acrylic, a small, soft brush, and brushed the brown on the larger stems and branches, turning them into pretty convincing trunks.

Then I diluted some more glue, rinsed out my brush, and carefully brushed some glue onto the small upper branches, then shook some flock over them, forming foliage.
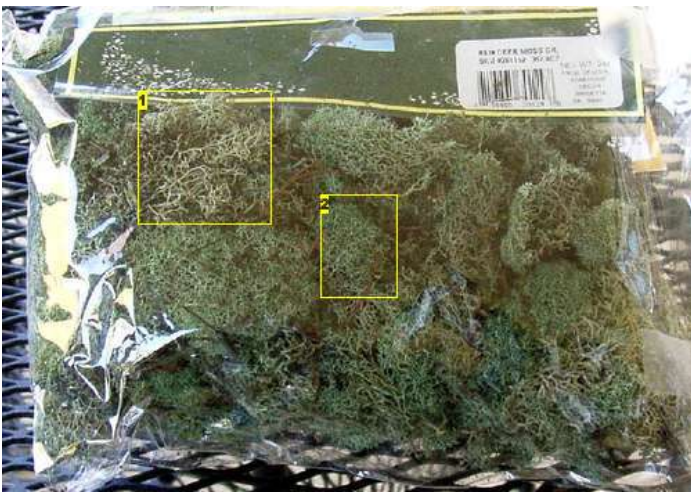
I left them to dry, and got back to the egg.

Image Notes
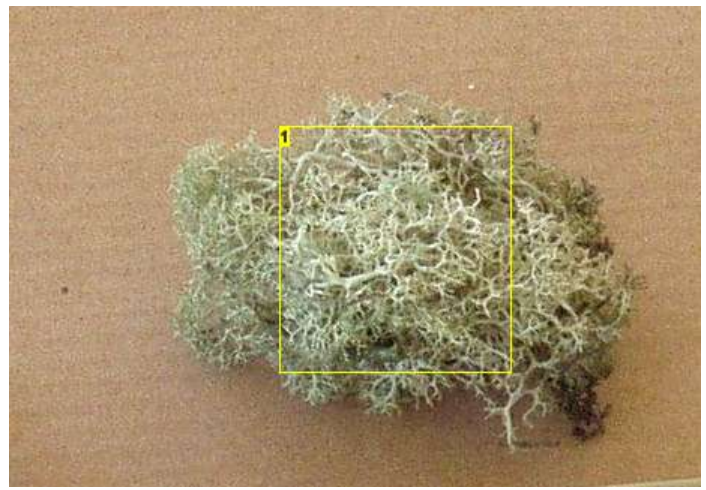1. Looser texture, for big trees.
2. Tighter texture, for small trees.
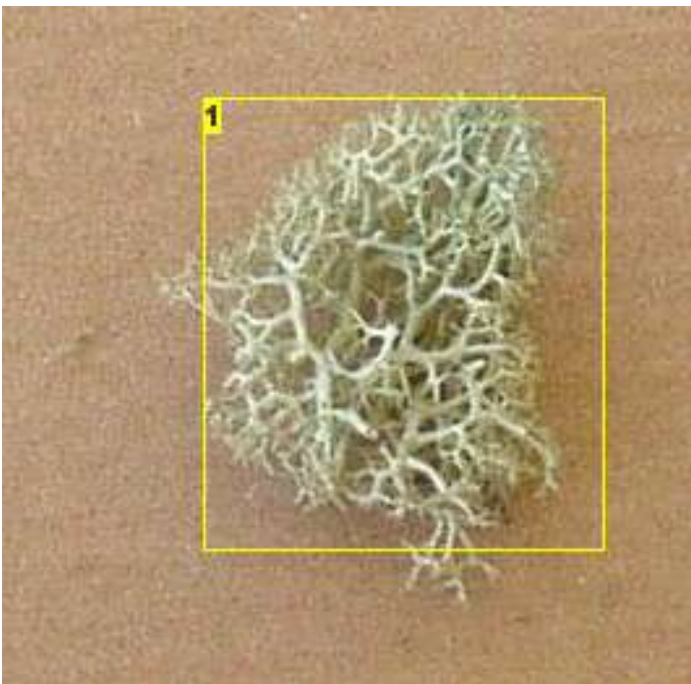

Image Notes
1. This clump looks promising.

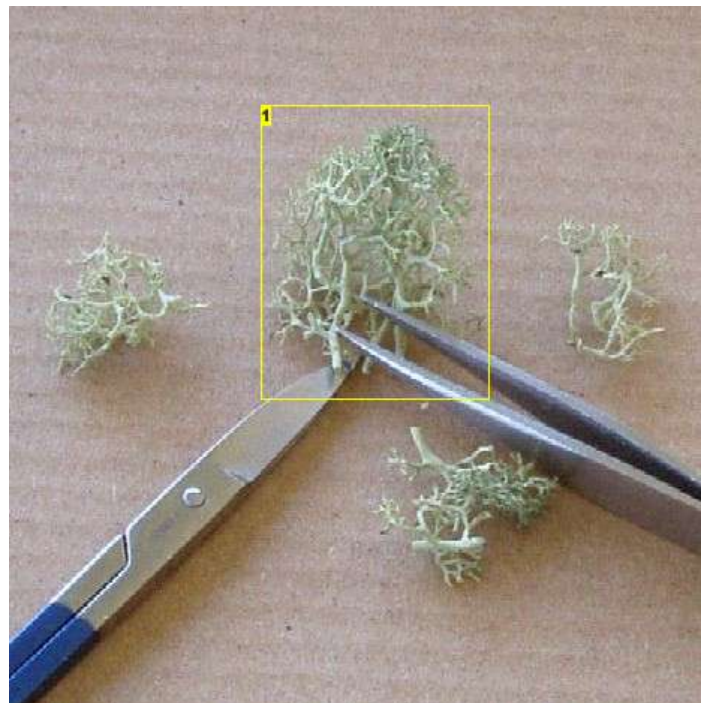**Image Notes**
1. The most promising clump cut out.

Image Notes
1. This is starting to look like two neighboring trees.

Image Notes
1. Some finished trees. Sorry they are so blurry.

step 5: Expand the Landscape

There's not much to say about this step that would help one replicate it. Painting skills can be taught (yes, really, even to people who "can't draw a straight line"), it's just outside of the scope of this instructable. There are a few good books out there, and some good teachers, and what it takes is a willingness to let go of visually preconceived notions, time, patience, practice, and, while you can do it on your own, it does help a lot to have a teacher who can point out mistakes and teach good material skills.

Speaking of material skills, it's been years since I did any real-life (as opposed to digital) painting with anything other than watercolors. Since what I had was calling for a more opaque paints, like gouache or acrylic (I went with acrylic, since it's permanent). So my first attempt was frustrating, and looked like something a third-grader might produce (no offense to third-graders, but most, regardless of how talented they might be, have not yet developed all the skills to produce more advanced stuff). And advanced stuff was definitely called for here. I was aiming for a Trompe-l'Oeil sort of landscape, that would make the 3-d mountains neatly segue into the distance, instead of looking awkward. I went back to google images and pulled up a few mountain panoramas for reference. It really helped me get the colors and textures right, and in the end I was very satisfied with the result (and very proud of my first attempt at Trompe-l'Oeil).

I also painted the rocks on the bottom. That part was actually easy: some muddy greenish-brown. After it dried, I added more painted talus to the bottom, and to the sides, to fit in with the landscape.

Image Notes
1. The three dimensional rock.
2. The illusion that the 3-d rock is part of a bigger mountain.

Image Notes
1. I actually painted a couple of dabs of glue in a few spots here, and shook some grass over it. It made for more interesting texture.

step 6: Grow the Trees

It was time to add the trees. While I did take pictures after this step, they all came out too blurry, so there aren't any to show. Not that I could actually have taken photos while sticking the trees in there, I had my hands full. This step was probably the most painful: glue was not going to hold these trees upright, so I tried using the Apoxie clay, which eventually worked. I ended up having to mush a little piece of the clay to the surface of the rock where I wanted a particular tree, except it was sticking there only half-heartedly (for whatever reason it doesn't seem to adhere terribly well to plaster, which I already knew from trying to secure the plaster rocks in place, except that it wasn't that much of an issue then, because I had a lot more surface area to work with). Then I would wrap a little sausage of the clay around the base of the tree trunk, trying to mush it to the moss stem as best I could (and, turns out, it's not sticking particularly enthusiastically to the moss either). Then I would use the tweezers to mush the two pieces of clay together, and make the tree stick out at a good angle.

If there was an easier way to do this, I don't know it. It took many false starts and a lot of swearing and I finally ended up with a few trees where I wanted them (I did not end up using all the ones I initially made -- there were just too many, and the landscape was wrong for dense forest).

I let the clay cure, then brushed a little paint where it was covering the trunks. Thankfully, it's color is a nondescript dirty gray, so it was actually blending in pretty well with the surroundings. A couple of strategically placed pieces of talus, and a bit more grass made the trees look like they've always been there.

step 7: Pour the Lake

I used clear casting resin, because it looks so much like water, and it will work in as thick a layer as you need it to (i.e. you don't have to worry about how deep your lake it). The only thing I can add to the instructions on the jar is: once you pour it, put your project someplace it can sit safely for a while, and DO NOT MOVE IT! Once the surface starts jelling, disturbing it with movement is almost guaranteed to create weird looking folds and pits in the surface of the water. And no, it does not look like any waves I've seen. Just leave it alone.

I used a little dye (this was produced by the same company, specifically for use with the resin. Don't use food coloring -- it probably wouldn't mix evenly and might end up looking terrible) to tint the water yellowish green. When I poured a healthy amount resin into the mixing cup I saw that it has a bit of a yellow tint already, so I don't know if I should have bothered to dye it. (No, not all the resins have a yellow tint, I have another kind in a drawer, an epoxy, versus a catalyst activated kind, like this one, and it is crystal clear). My last trick for the eye came in the form of foliage fiber. It also came with the diorama kit. The way they were suggesting you use it didn't even look convincing in their pictures, which is bad. I honestly have no idea how one could possibly use that to simulate any terrestrial vegetation. For aquatic vegetation, on the other hand, it was just what the doctor ordered.

I ripped off a clump of the stuff and pulled it apart until it was a loose collection of green fibers (kind of like the equally unconvincing spider web you can get for Halloween decorations). I then stuffed a wad of it under my rocky plateau, and secured it with some glue. Even before I poured the resin it made the space look murky with algae. I had surprisingly little trouble getting it to stay down as I poured the resin, too, though some of the fibers were changing the surface tension a bit, making it look less than flat. I figured a second layer of resin would fix that, and it did, along with the weird crater I made on the far side of the lake, by moving it. I poured the second, much thinner layer the next day.

By the way, I just have to say a few good words about the temporary base I'm using in this picture. It started life as a styrofoam bowl in my office cafeteria. I sliced off the bottom, turned it upside down, and voila, a very secure base in about 30 seconds. I actually entertained the idea of using it as a foundation for a permanent base for the egg. Then it came to me that a little twig wreath would be much more appropriate, if less stable. Now, I know I've seen tons of them in every size imaginable, but when I went to every store imaginable looking for one, they didn't have anything that would have worked for my egg. So I bit the bullet, bought some twigs, some brown dyed raffia, and a tiny wreath "base", also twiggy, and made my own. While it was not as nice as what I envisioned, it worked for looking like a nest when I went to the park to take pictures of the finished egg.
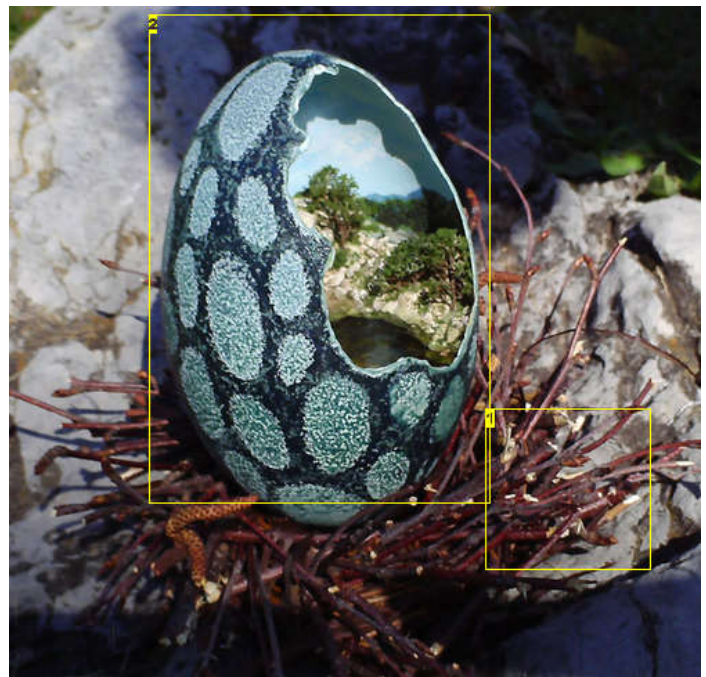
Image Notes
1. The twig wreath.
2. The finished egg.

Related Instructables

emu egg clock (slideshow) by angelkake

Half A Dozen Ways To Color Easter Eggs (video) by Jennifer F.

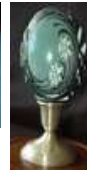**Carving a lattice and acanthus pattern on an emu egg shell** by bbstudio

Other egg art designs by Carole (slideshow) by Carole B.

My Personal Favorites that are not my Faberge Interpretations! (slideshow) by Carole B.

Easter Rattle Snake by onebitpixel

Art Nouveau Daffodil Emu Egg Shell (slideshow) by bbstudio

Easter Egg LED Lamp by kentkb

Comments

30 comments **Add Comment**

teorible says: Dec 29, 2008. 5:19 AM **REPLY**
This is awesome. I wanted to share a tip I got for terrain. Instead of casting rocks (although uniformity is the strength of this technique) I'm going to try using bark. I've been using chunky cork tiles to good effect, but recently saw some stuff with the sort of bark used as landscaping material, and it was very nice. In a project like this it could save some time as well.

mmh says: Nov 1, 2008. 8:24 AM **REPLY**
Congratulations! What a precious little world! Nice instructable!

Faro says:
Congratulations! Lovely entry.

Oct 31, 2008. 10:02 PM **REPLY**

Carole B. says:
Congratulations on being a Winner. I told you upon being a Finalist that LIKED your egg.I still do!
My Best Wishes to you.
Carole B.

Oct 31, 2008. 6:48 PM **REPLY**

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egger1 says:
Congratulations on your win! This is a fantastic design so well done with all the details and hard work! Thank you for the detailed instructions too. This is something I would like to try in the future and your clear instructions and comments have made it seem more possible to be accomplished.

Oct 31, 2008. 6:20 PM **REPLY**

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oldhamedia says:
Congratulations on being a winner!!! I love this one most of all!

Oct 31, 2008. 5:30 PM **REPLY**

Carole B. says:
Congratulations on being a Finalist. I have assisted my nieces and nephews in the past few years develop rhea and emu egg designs for entry into 4-H Achievment Days in SD, and this egg reminds me of one of their Purple Ribbon Designs! So I LIKE it. Your work is nice.
My Best Wishes to you. Carole B.

Oct 22, 2008. 6:35 PM **REPLY**

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kelllbelll says:
Wonderful! Congrats on being a finalist!

Oct 22, 2008. 5:07 PM **REPLY**

KaptinScarlet says:
I love it, very original and beuatiful

Oct 20, 2008. 4:26 AM **REPLY**

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rh118 says:
nice....

Oct 18, 2008. 7:49 PM **REPLY**

RoyalPayne says:
Nothing wrong with your twiggy base. Purple sets off the blue of the egg. Inspiring.

Oct 17, 2008. 7:17 PM **REPLY**

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damabeth says:
Absolutely the best one!

Oct 17, 2008. 12:17 AM **REPLY**

---

jenkjenk says:
wow!!

???????????

Oct 16, 2008. 6:35 PM **REPLY**

SugarTeen52 says:
Woww, that's incredible!!!!! I love working with miniatures. This type of thing should be my next project XD Very beautiful work!

Oct 16, 2008. 3:09 PM **REPLY**

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stkelsiej says:
that is amazing. great job.

Oct 16, 2008. 2:26 PM **REPLY**

S1L3N7 SWAT says:
WOW!! 5/5 Great Job. I'm voting for your egg!

Oct 13, 2008. 5:02 PM **REPLY**

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nicolasjara says:
That's beautiful! I'd like to be there.

Oct 12, 2008. 6:53 PM **REPLY**

Culturedropout says:
Oct 12, 2008. 10:46 AM **REPLY**

Truly awesome! It looks like a nice place to live. No housing developments or traffic or politicians or wars! You've done an amazing job crafting something very realistic and attractive. I admire your skill and perseverance.

Cthulu says:
Oct 12, 2008. 9:43 AM **REPLY**

Amazing work. The detail you put into this is great.

5/5

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joey2542667 says:
Oct 12, 2008. 9:19 AM **REPLY**

awesome!
(don't usually do this but)

5/5 stars!
voted

PKM says:
Oct 12, 2008. 6:07 AM **REPLY**

That is incredible. I'm familiar with most of the techniques here from knowing tabletop gamers, but I'm still incredibly impressed at how lifelike you got the trees to look. I'd love to see a high-res macro of this in a lightbox (or any other good diffuse lighting)- if you have a camera capable of macros I would love you forever if you uploaded a few full-res shots somewhere.

pixelinabitmap says:
Oct 12, 2008. 6:54 AM **REPLY**

Hey, thanks, it's extra nice to impress people who have seen stuff like this before. Unfortunately, I don't have a camera capable of macros, or, more importantly, I don't have a lens for it. Also, unfortunately, I'm a complete retard when in comes to photography, nor can I set up proper lighting. The photos you see are pretty much my best effort, but if you want high-res version, I could probably upload them somewhere.

Keith-Kid says:
Oct 12, 2008. 6:53 AM **REPLY**

Wow! Looks amazing! What a great idea!

RadBear says:
Oct 12, 2008. 6:25 AM **REPLY**

Very cool!!! I'm really impressed.

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omnibot says:
Oct 12, 2008. 5:28 AM **REPLY**

Wow! I'm loving this! It's so .. artish .. and yet so .. real. Wow!

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hellstudios says:
Oct 12, 2008. 12:37 AM **REPLY**

NICE

---

knatalie says:
Oct 11, 2008. 8:55 PM **REPLY**

Wow! This is awesome!! I love it, sis!

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threecheersfornick says:
Oct 11, 2008. 7:36 PM **REPLY**

LOVE IT!

ChrysN says:
Oct 11, 2008. 7:17 PM **REPLY**

It's beautiful, great job!

Scammah says:
Oct 11, 2008. 6:41 PM **REPLY**

This is so cool many props on this one.