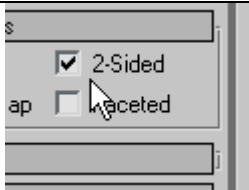


Using photos for materials is swell but we always have problems with seams and repetitive tiling effects. Another class of materials is called Procedural Materials. These are mathematically based and won't have the above-mentioned problems.

Lets start with a teapot.... of course.



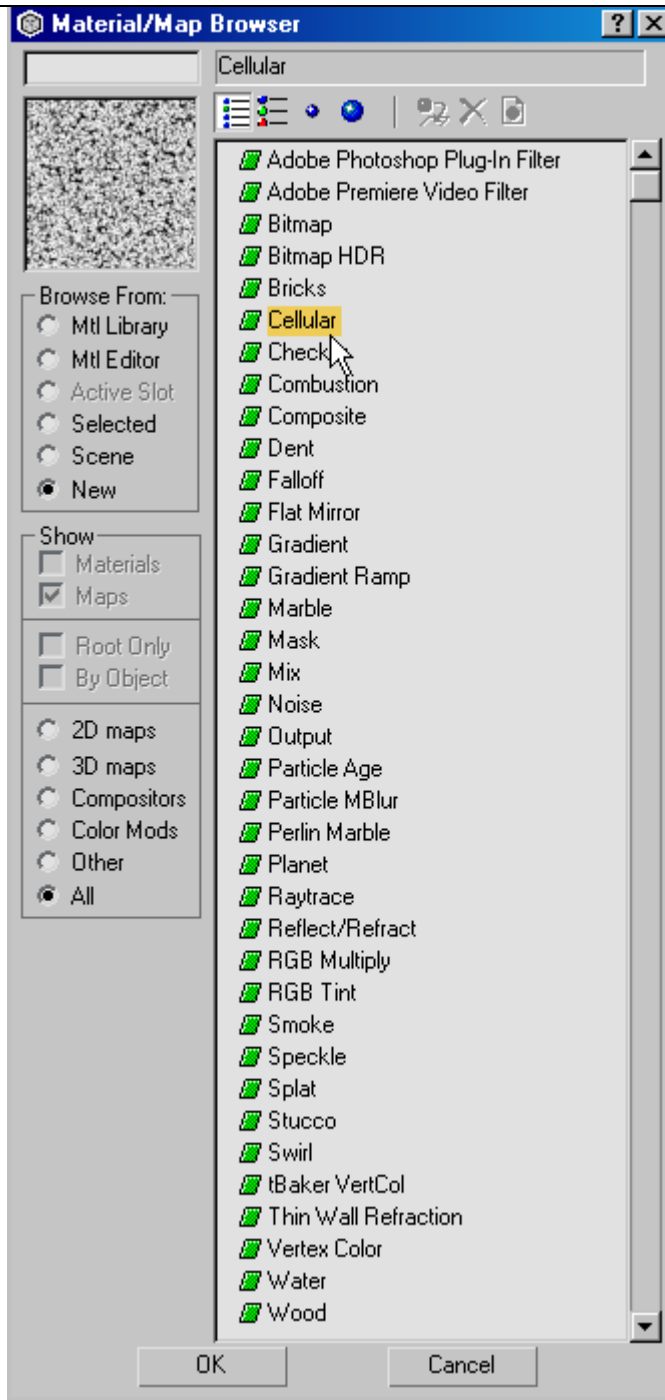
Open the material Editor



Make sure 2-sided is checked otherwise we get goofy looking results



Select an unused shader, open the Maps rollout and click on the word "none" next to Diffuse



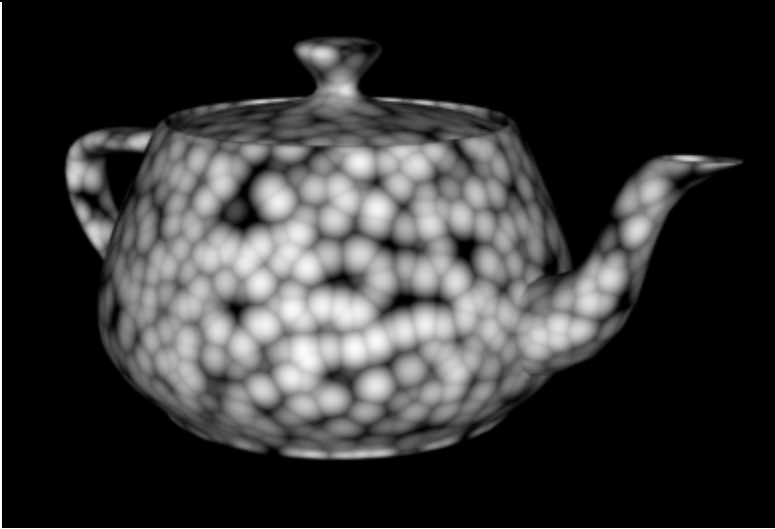
Double click Cellular

All the things that you see here are procedural maps and can be used to create materials. Some work better than others. We'll try two different ones:

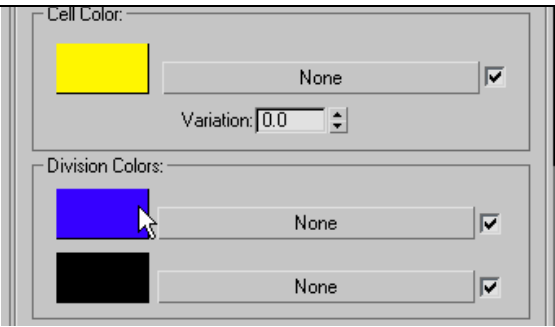
These also work well:

- Bricks
- Checker
- Dent
- Gradient Ramp
- Marble
- Noise
- Perlin Marble
- Smoke Speckle
- Splat
- Stucco
- Swirl
- Water
- Wood

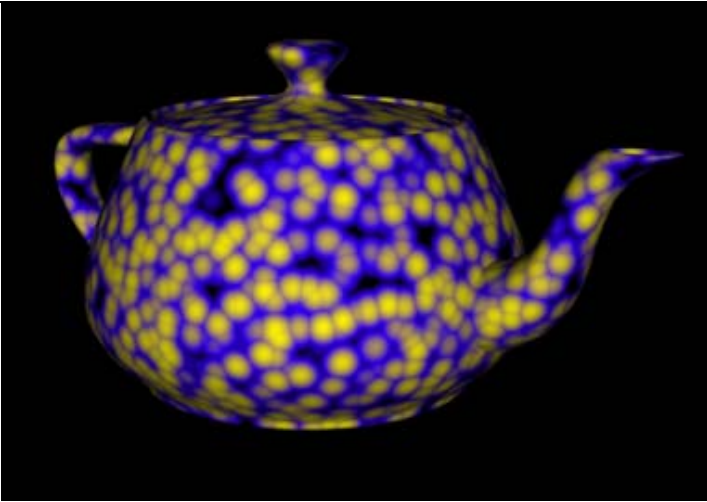
The others I haven't mentioned act a little differently and are used for more advance special effects



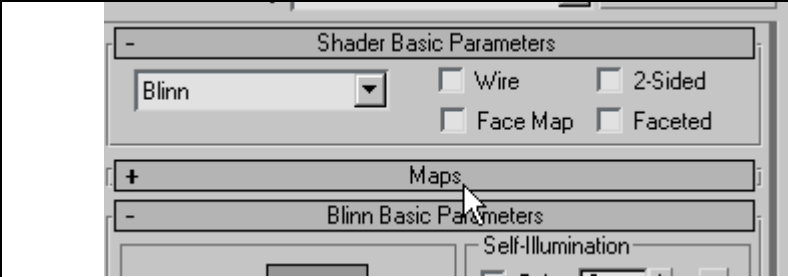
Apply the material to the teapot and render. Pretty weird!



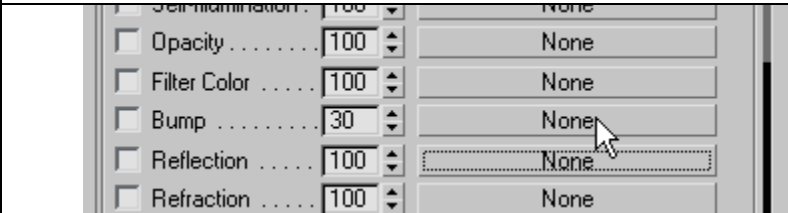
Under the Cellular parameters change Cell color and first division color by clicking on the swatches



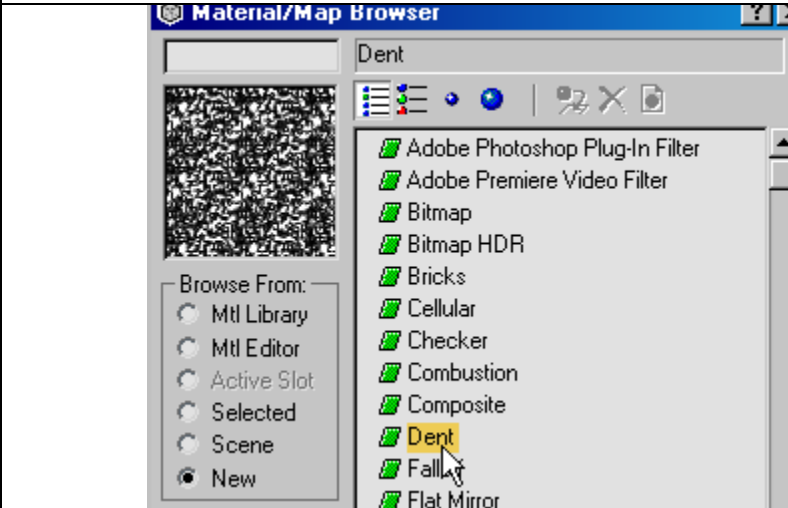
Render. Really weird! Try playing with some of the other Cellular settings. Eventually we will animate these materials and we can make them move and ooze across the objects surface. Its pretty cool but kind of creepy!



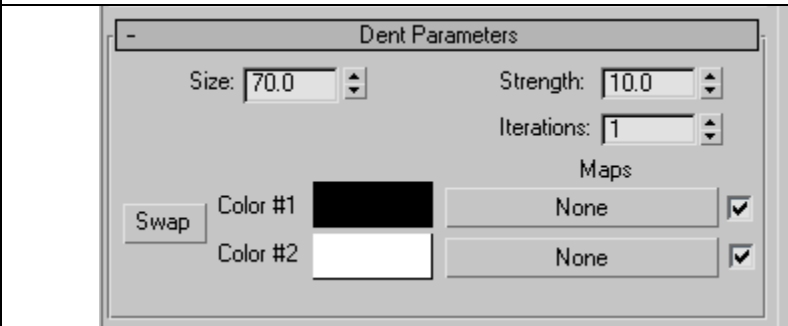
Lets try a different one. First select a new unused shader in the Material Editor. Open the Maps rollout as before



Now, select the word "None" next to Bump



Double Click on Dent



In the Dent Parameters change Size to 70, Strength to 10 and Iterations to 1



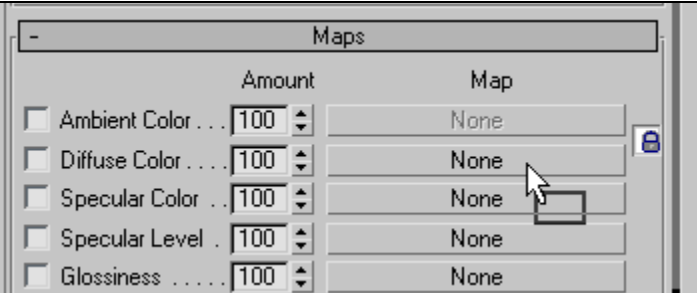
Render and we get dents



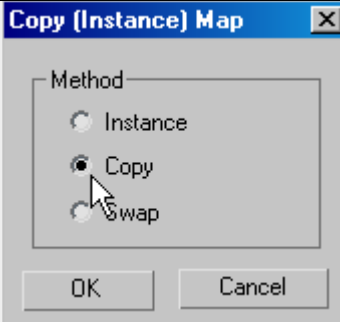
We need to go up a level in the material editor so select the Go to Parent icon



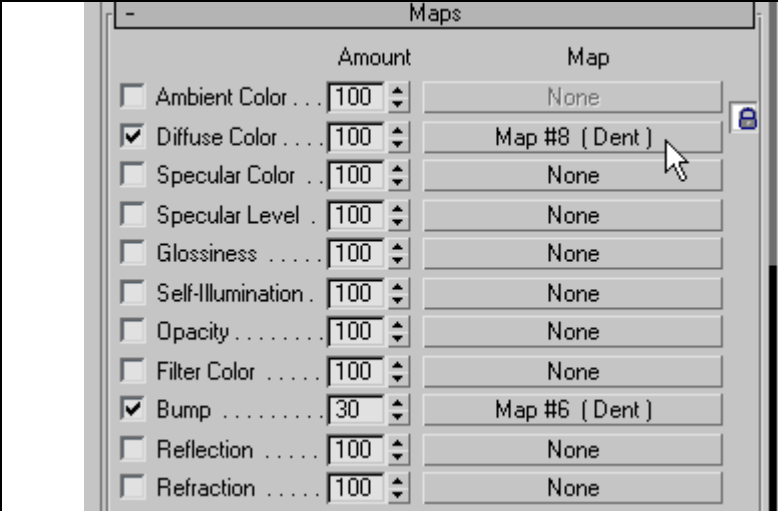
How do you know where you are in the Material Hierarchy? If neither of these arrows are black, you are at the parent level



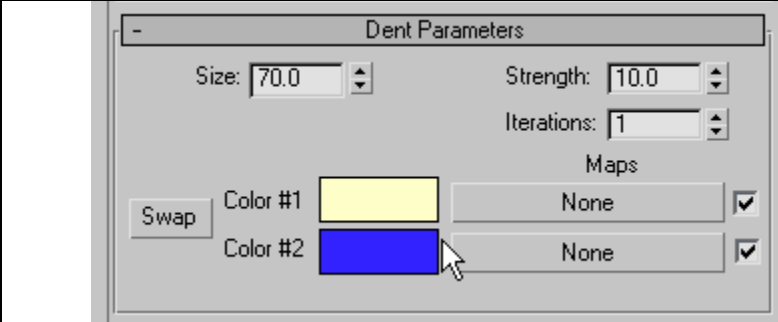
Next, left click and drag on the word "Dent" in the Bump slot to the Diffuse slot. Release the left button



Select Copy



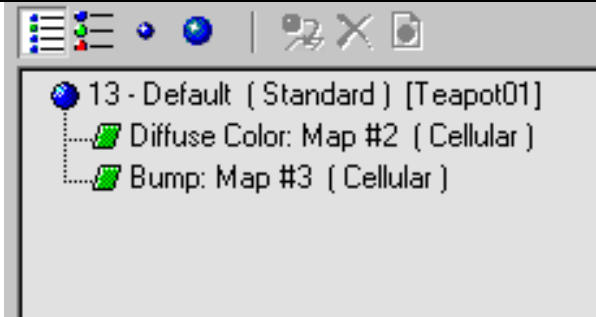
Now we have dent in two places, the Bump slot and the Diffuse slot



Click on Dent in the Diffuse slot and change the color swatches. Now we can make the dents have different colors



Render



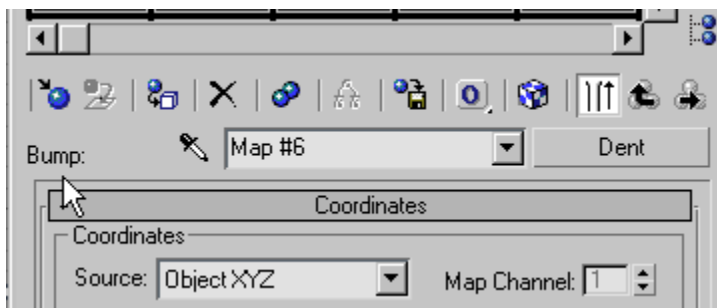
All this stuff about materials, parents and siblings sounds confusing. This is what the Hirachy of the material we just made looks like. The Blue sphere is the Parent Material, it's the original shader we started with. The two green parallelograms represent the two children



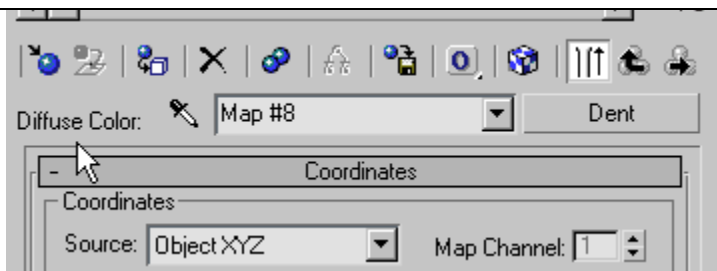
We can edit the material at different levels. At the parent level and the children level. Use arrows to navigate



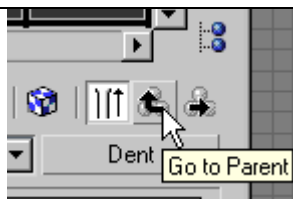
If I pick the Go Forward to Sibling Icon, I move back and forth between the Siblings, Bump and Diffuse



Go ahead a click once, now I'm at the Bump Child



Go ahead a click the Go Forward to Sibling icon again and I'm back to the Diffuse Child



Click this one and you go back to the Parent level, our original shader.