RC Car


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Section 25
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Figure 1 Isometric view of top side of RC Car

Figure 2 Isometric view of bottom side of RC Car
Figure 4 Detail isometric view of front of RC Car

Figure 3 Side view of front right wheel and brush guard
I chose to make an RC car that is based off RC from Toy Story. I chose this idea because the Toy Story movies have always really appealed to me, and I liked RC’s unique body shape. I thought his shape would be challenging enough to stretch my SolidWorks abilities to new heights.

In order to complete my RC car, I used many extrusions. I extruded the tires out as well as the spoiler. I also used extrusions for the axles on the body that hold the wheels on. However, for the rims, I used both extrusion and extrusion cuts. I used extrusions to expand the rim, and then I used smaller circles on both sides of the rim and cut in, but not all the way because there needs to be some material to attach the wheel to the body. I used a new feature to make the designs in the wheels. First I drew one pattern on the rim and then used the linear pattern feature to recreate them all around the center axis.
of the wheel. Then I proceeded to use the extrusion cut tool to cut all the patterns out. I used another new feature for the tire. I made all the treads for the tires using a circular pattern. I started with one row of treads, and then I made the other two off put so that they wouldn’t all be aligned, which makes the tire look more realistic.

To make the body, I used a lot of lofts to make the sleek body style. I did this by extending planes out from each other, and then making a slightly smaller drawing of the one on the previous one. This makes a nice arc that’s not too steep or shallow. I used this technique to make the black part of the body, and then I used it to make the wings of the body as well. For the back part of the body I extruded everything out.

I used the sweep tool to make the bars underneath the car that hold in the brush guards in. I also used the sweep tool to make the shocks and the brush guard. I used a new feature to make the shocks. I used the helix/spiral feature to make the spring shape, and then I used the sweep tool to make it thicker so that it would look like a real shock. The hardest part of this project was the brush guard. The features I used for it were the sweep feature, and the reason why it was so hard to make was because I was trying to sweep the entire brush guard at once, but I should have been sweeping it in sections since the sweep feature doesn’t work when there is more than one path it can take.

The biggest thing I learned from the SolidWorks portion of our semester is how to use SolidWorks. I've never used this program before, so it took some getting used to since the only 3D modeling software I've used is Inventor. I really enjoyed using SolidWorks and learning how it can save a lot of time and money in the future because a company could make a product on SolidWorks, and then run a bunch of tests on it using the simulations, so they will know how the product is going to work before they even make it.