1086-K1-2321 **Carissa M Brtalik*** (carissabrtalik@yahoo.com), 401 Ocean Avenue, Malverne, NY 11565.

Algorithms for Creating Self-Similar Curves and Surfaces in $\mathbb{R}^3$. Preliminary report.

We explore a technique for constructing self-similar planar curves from smooth base curves, originally introduced by Craig Kaplan, which result in a fractal-like structure. We then extend this work to curves and surfaces in $\mathbb{R}^3$, discuss their mathematical properties, and visually demonstrate the results of these algorithms on a number of aesthetically pleasing examples. (Received September 25, 2012)