Presentation: Space Filling Curve

The goal of the presentation is to explain what space filling curves are. A good starting point is to read the entry on "Space-filling curves" at www.wikipedia.org. Your presentation should include

- A description of what a general curve is.

- A rough definition of continuous function is (i.e. function is continuous if you can draw it without lifting your pencil)

- Give an example of a space filling curve. Give a definition of a space filling curve. How long is the path?

- At LEAST one of

    - The history of space filling curves

    - Volume filling curves. Do they exist? What is a curve in 3-dimensional space? If they exists find one.

    - Are there any space filling curves which aren't self similar? (i.e. which don't satisfy the condition that if you magnify them they still look the same)

    - The "size" of the range. I.e. what does it mean for two sets to have the same size. How do (one-to-one) space filling curves show that there are the same number of points in the plane as in the interval $[0, 1]$?

You should also feel free to expand on the above in any directions you would like (so long as they are related to the topic).

If you have any questions regarding the presentation feel free to e-mail your TA or Dr. Ackerman.