**Splash Class Notes:**

1. Fractals Title Slide
2. Various Fractal Images
3. What is a fractal – self-similarity, and continuous but nowhere differentiable. How do we build a fractal? (Slides 1-3, about 5 – 10 minutes)
4. Constructing the Koch Curve and the Sierpinski’s Triangle. Questions to consider: Compute area under Koch Curve, discuss area of Sierpinski’s Triangle.
5. Various other ways to construct Sierpinski Triangle – Cutting Triangles, Pascal’s Triangle, Chaos Game. In your groups, come up with your own fractals; can you find more ways to come up with your fractal? – if some groups finish early, have them start to think about dimension. (Slides 4-5, about 5-10 minutes) (Group work 10 minutes)
6. Dimension: Does a fractal have a dimension? What does dimension even mean? Hausdorff – “amount of space”; Minkowski-Bouligand (box-counting) – size compared to length.
7. Box-Counting Dimension image. Try to figure out the dimensions for the Koch Curve and Sierpinski’s Triangle. Can they compute the dimension of the fractals that they created? (Slides 6-7, about 5 – 10 minutes; w/out their group work) (Group work 10 minutes)
8. Statement of dimensions for the Koch Curve and Sierpinski’s Triangle.

**Times: Room 160-323 (Sat 10 – 12 & Sun 12 – 1), check in Building 110.**