

Geometry Playtime: Jurassic Park Fractal

Instructions: Due Wednesday, January 27th, 2016

Gather materials: one-inch strips of paper, pencil and eraser.
Answer questions on the back of this paper.

Directions:

1. Take a strip of paper and fold it in half end to end, right to left.
2. Again, fold the folded strip end to end, right to left.
3. Always go the same direction.
4. Fold it again end to end, right to left.
5. One more time: end to end, right to left.
6. Now unfold it, and make all the turns into right-angles.
7. Does it look like the diagram? —->
8. This isn't actually the first iteration of this fractal. An iteration jumps a level every time you add another fold, so what should the first iteration actually look like? Why?
9. Make a set of iterations, from the first to the seventh, of the REAL iterations. You will probably have to tape strips together so they're long enough.
10. Make sketches of what each iteration looks like. Don't forget to make each corner a right angle before you sketch it.
11. Encode the iterations: Can you figure out the pattern of left and right turns without having to look at the folded pieces of paper? What's the pattern? Use the tables below.
12. What's the highest iteration you can fold?
13. What's the highest iteration you can encode?
14. What other patterns do you see in the fractal as it develops?
15. What is a fractal?



