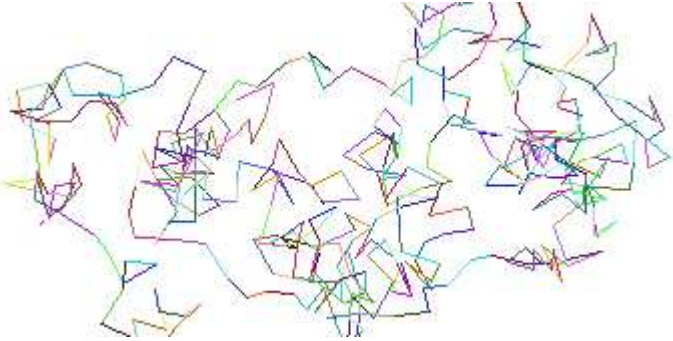


# Randomness

For these activities, you are encouraged to refer to Python documentation. Find [turtle documentation](#), the [list documentation](#) and [random documentation](#). Poke around and learn new things, too!

## Activity 1: Squiggles



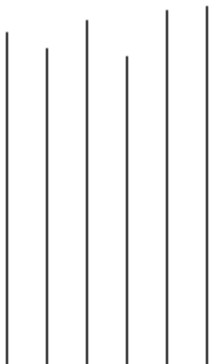
Write a Turtle Graphics program that draws random squiggles. Your turtle should go forward a random amount, turn a random amount and draw a line of a random color. Your program should run forever and produce output similar to the image at left.

Make sure you understand what the type and range of parameters to forward, right and color are and pick random values that fit.

## Activity 2: Random art

You have freedom for this one! Find another kind of random art that you could create with turtle graphics. Try to think beyond the sample code I am giving. How about getting input from the user? Maybe you could use color gradients. Make sure you check out the turtle documentation for ideas.

## Activity 3: Die rolls



Write a program to simulate die rolls. You should have a constant at the top of your program to set how many rolls should be simulated. Your program should output how many of each of the six possible rolls came out, the percentage of each roll and a Turtle Graphics histogram of the data. My very boring histogram is shown to the left. Yours should be much better – include color and labels.

Refer to the coin toss program we wrote in class for ideas – but careful, it’s not exactly the same! You will need to use lists, so make sure to check out the documentation if you are unsure of how they work.

## Activity 4: Rock Paper Scissors

Write a rock paper scissors game. ‘Nuff said.