I designed my program to output the results of simulating unloaded and loaded 6-sided dice, as well as unloaded and loaded 20 sided dice. The program could easily be adapted to take arguments for custom simulations.

My results (which you can replicate by running the program) were basically what I expected. My mean, median and mode (with one million simulations) were all right around 7 for unloaded, six sided dice. This is the most common number that you can roll (this is why the game settlers of catan uses it for the robber…). My standard deviation was 2.41, which apparently is the expected deviation when rolling dice. The loaded dice weighted the statistics upward, the most notable of which was the mode: it became 12 because 12 was probably occurring around 25 percent of the time (.5 * .5).

The 20 sided die had similar results, which you can see by running the program.