We have a problem. At MathILy, MathILy-Er, intensive summer programs for talented high-schoolers, we have a Week of Chaos during which 10–15 courses are offered across 5 time slots (with 2–3 classes per time slot). We are only given instructor-course pairings and students’ semi-ranked topic preferences. At base, this is a partition problem, as each student must be assigned a class in each time slot and we optimize student preferences. However, there are two wrinkles: (1) We simultaneously assign classes to time slots and students to classes, and (2) there are additional non-obvious constraints for class size, student preparation, instructor/student exposure, instructor/instructor exposure, and student/student social dynamics.

This situation—even with our small data sets—is too complex for straightforward scheduling algorithms, but it is amenable to ad-hoc approaches augmented with elbow grease. We will describe the code we use to reveal features of the data, and then compare/contrast two human-executable algorithms we have used to solve the problem. We will also describe a reframing of the problem that promises to simplify the production of solutions, and what happens when we ask some Week of Chaos students how they would set up the scheduling problem. (Received September 19, 2015)