Due to a recent trend in public schools toward earlier school start times, most high schools now start the day around 7:30 a.m. (Trudeau). Unfortunately, adolescents do not start producing melatonin (which induces a sleepy feeling) until 11 p.m. and they do not stop producing it until 8 a.m. As a result, 28% of students fall asleep in first-hour high school classes each day (Kalish). The purpose of this study was to examine the relationship between students’ performance in a class and the time of day that they take it. Teachers that taught at least a first, fourth, and seventh hour class (representing the beginning, middle, and end of the day) were recruited. Students were assigned codes and asked to report their scores on each exam taken in the class. They were also asked for information regarding their preparation for and their amount of sleep prior to the tests. Teachers who chose to participate reported their students’ scores using their codes and provided information regarding the grade distributions of their classes. Trends indicated a significant decrease in student performance toward the middle of the day and then a steep increase in performance as the day progressed from there. First-hour students performed worse than students taking the same class even a few hours later in the day, but they were not the worst-scoring students. Further research may allow for the construction of the ideal schedule for an underperforming student in order to maximize college readiness.