As part of a 2014 commitment to President Obama to recruit and graduate more STEM majors, Yale developed a not-for-credit course, Online Experiences for Yale Scholars (ONEXYS), to boost the quantitative reasoning skills of selected incoming freshmen. Not granting course credit meant that the ONEXYS team had to think hard about motivation. We discuss extrinsic and intrinsic motivators including social relationships, learning communities, badging software, progress bars, a leader-board, a “completion” metric, and post-program celebrations to encourage student engagement. We examine performance data, survey data and focus group feedback to assess the success of each of these elements. (Received September 22, 2015)