Sophomores can do Research!

According to the CUPM recommendations for undergraduate research, “every student should work, independently or in a small group, on a substantial mathematical project that involves techniques and concepts beyond the typical content of a single course.” But how do we get our students ready for these experiences? In this talk we present a research project, used in a differential equations and linear algebra course, which foreshadows and strengthens the mathematical habits of mind needed for undergraduate research. We will discuss the logistical challenges associated with the project, present several student projects, and give suggestions for implementation. (Received September 12, 2017)