NASA's Kepler mission has the goal of detecting transiting planets as small as the Earth, even some that might be habitable. Kepler is scheduled for launch in November 2008. After transiting planet candidates are detected, the challenge will be to sort out the real planets from the stellar imposters masquerading as planets. The ultimate test is a spectroscopic orbit that confirms the planet's mass. A key facility for this follow-up work will be HARPS-NEF, a collaboration between the Geneva Observatory and Harvard University to build a version of HARPS for a telescope in the North. Kepler stares at a single field of view in Cygnus and Lyra for the entire four-year mission, to allow the detection of planets with orbital periods as long as a year. As a result the systems discovered by Kepler will be relatively far away, faint, and difficult for follow-up observations. To complement Kepler we need an all-sky survey that can identify the nearest and brightest transiting systems. For the photometry to be good enough to push to smaller planets we need to get above the Earth's atmosphere. TESS is a proposal for such a mission.