Reasoning with Functions is a new and innovative pathway to Calculus for STEM intending majors. Student engagement, inquiry, discovery, and exploration are at the heart of this innovative curriculum. Based in best-practices, Reasoning with Functions relies on the growing body of published evidence which supports an inquiry-based approach to student learning. Active learning, coupled with the intentional development of functions as processes, are integrated into daily lessons for students and supporting materials for instructors. The authors will discuss the design and the components of these lessons and share specific examples from the curriculum. (Received September 25, 2017)