Mathematicians, scientists, and educators are joining forces in Wisconsin to better prepare pre-service teachers for success in taking the Praxis II Mathematics Assessments. In collaboration with the Academic ADL Co-Lab, which promotes the use of reusable content for distributed learning, the Wisconsin Praxis Project’s mission is to create web-based Learning Objects (LO). These LO’s are designed to help pre-service teachers re-learn subject matter content specific to the Praxis II series, a required test for state certification. Each web-based LO consists of an interactive tool (termed the sandbox) where students can explore and experiment with the key structures of the mathematical problem. This session will showcase a complete collection of these interactive web-based LO’s designed to prepare pre-service teachers for the Middle School Mathematics Assessment, as well as highlight the design process and the immediate application of these LO’s into undergraduate mathematics courses below calculus. (Received September 26, 2006)