The release of the Common Core Standards in Mathematics and the imminent release of Next Generation Science Standards present the mathematics community a unique and important opportunity to engage in discussions about high quality learning in both math and science teaching. For example, it is important for science teachers to be aware of the depth of thinking the standards for mathematical practice demand, and math teachers benefit greatly from learning how to use authentic scientific tools and contexts in the classroom especially with the increased emphasis on mathematical modeling in the standards. This talk describes several early models we have attempted that have potential for creating dialogue and cross fertilization of ideas between math and science teachers in light of the standards. Among the models are: engaging students in authentic classic science experiments in the mathematics classroom using sensors connected to ordinary graphing calculators as well as using video capture, creating opportunities for teachers to interact directly with scientists and hear about their work, and engaging science and math teachers in conversations about the mathematical practices. (Received September 25, 2012)