The IDEA Studio is dedicated to promoting the development of critical and creative thinking skills in learners of all ages. To that end, the studio joined forces with two eighth grade teachers in Roanoke County to implement a design-based learning environment with 50 students over the course of 18 weeks. The transdisciplinary, collaborative learning environment aimed to emphasize the importance of the connections between and among disciplines and to expose students and teachers to a project-based learning methodology that puts students in control of their own learning.

Student design teams engaged with projects related to civic responsibility as they identified problems in their community and designed solutions to those problems. Among the solutions were an anti-bullying robot, a solar panel car kit to alleviate the rising cost of gas, and a fingerprint-activated medication dispenser to prevent teens from stealing prescription drugs. Through the process, students investigated and utilized knowledge not only from the disciplines from which their teachers originated – civics and language arts – but also from the arts, science, technology, engineering, and math. Design teams crafted interactive exhibits to share their solutions with the public at the Science Museum of Western Virginia on Saturday, February 9, 2013.

**Participants:** Middle school students and teachers

**Staff:** Teri Wagner, Liesl Baum, Phyllis Newbill

**Type:** K-12 Collaboration

**Date:** September, 2012 – February, 2013