

1096-VR-2098 **Jenna Price Carpenter*** (jenna@latech.edu), PO Box 10348, Ruston, LA 71272. *Using Circuits to Teach Truth Tables: Making the Math Real.*

Multiple places in our mathematics curriculum we cover a short chapter on logic - at the beginning of our pre-calculus course, in our introduction to proof course, and in our discrete math course. Particularly for non-math majors and even beginning mathematics education majors, logic can seem like a distant and theoretical topic without much application to the "here and now". We have used a one-day in-class lab on series and parallel circuits to help teach the concepts of "and" and "or" statements. Students (even those with absolutely no background in circuits) quickly grasp both concepts, aided with the visual and hands-on lab activities, and are able to translate even complicated compound series and parallel circuits and compound "and" and "or" logic statements back and forth with ease. In addition, the activity helps reinforce that the seemingly abstract concepts in logic are integrally connected with real world applications that they all see and use every day (cell phones, computers, etc.). We will review the instructional approach and give attendees an opportunity to participate in some hands-on lab activities. (Received September 17, 2013)