

1116-VQ-584 **Jenna P. Carpenter*** (carpenter@campbell.edu), PO Box 115, Buies Creek, NC 27506. *Using Coding Examples to Teach Inverse Functions: Helping Students Connect "Abstract" Mathematical Concepts to "Real" Life.*

Helping students see the connections (even if they are simple ones!) between what they view as “abstract” mathematical concepts and their world not only motivates them to learn the content, but also assists them with understanding concepts that otherwise become major stumbling blocks. One such concept (and application) is invertible functions and coding. Students are usually aware of the need to encrypt information sent via their cell phone, email, etc. One simple approach to encryption involves encoding the words of a message using numbers, then plugging the numbers into an invertible function and sending the resulting y-values. Starting with a simple coding example that utilizes non-invertible functions not only helps students understand the desired attributes of an invertible function, but also helps them grasp related concepts like composition of functions. We will look at a successful approach for introducing inverse functions via coding that works with any college algebra class, as well as some fun exercises that you will find your students requesting be on their exams! (Received September 08, 2015)