Satisfactorily answering the dreaded question “When will I ever use this in the real world?,” is always a challenge. In the case of conceptual algebra topics such as the introduction of the idea of a function it gets even harder. Luckily the basic ideas of cryptology provide an excellent motivation for both the study of compositions of functions and inverse functions. This talk will look at how these topics have been used in College Algebra classes for non-majors. (Received September 17, 2016)