1046-Y1-548 **Brian Hopkins*** (bhopkins@spc.edu). *The Standard Genetic Code and Equivalence Classes.*

There are 20 amino acids used by cells to create proteins. These are signaled by codons in RNA, which can be thought of as three letter words over the alphabet $\{A, C, G, U\}$. How do the 64 possible codons correspond to the amino acids? We detail a project where students explore various equivalence classes on codons before examining the actual standard genetic code. This project has been successfully used in discrete mathematics and in mathematical modeling courses. It was inspired by the presenter's participation in the Faculty Resource Network's seminar Bio 2010: Integrative Approaches to Teaching Science held in 2005 at New York University. (Received September 07, 2008)