1046-J1-818   **Vicky Williams Klima*** (`klimavw@appstate.edu`), Department of Mathematical Sciences, Appalachian State University, Boone, NC 28608. *Using Music to Demonstrate Group Theory.* Preliminary report.

Students in an introductory modern algebra course often struggle with the abstract nature of the material in the course. The twelve-tone musical scale can serve as a familiar example of a cyclic group for many students. In this talk, I will discuss some ways of making group theoretic ideas such as subgroups, automorphisms, and quotient groups more concrete by looking at examples in the cyclic group of order twelve and playing these examples on a virtual keyboard. These examples will serve to demonstrate some interesting connections between basic group theory and basic music theory. I have had success using this material with audiences ranging from gifted high school students in a physical classroom to collegiate modern algebra students in an online environment. (Received September 11, 2008)