1077-B1-698 Christine von Renesse* (cvonrenesse@westfield.ma.edu). Exploring the Mathematics of Tuning a Musical Instrument using Straws.

This talk will show connections between the tuning of musical instruments, its history, some "nice" fractions and ratios, (ir)rational numbers, and some exponents and roots. Straws (Pan flutes) are being used to explore how length corresponds to "nice sounding" intervals. The mathematics is appropriate for liberal art majors or future elementary school teachers but can be used for a lower level class for mathematics majors as well. The activity is part of a series of books "Discovering the Art of Mathematics" developed under a CCLI-NSF grant. See http://artofmathematics.westfield.ma.edu. (Received September 10, 2011)