

1096-J5-1214      **Otis C. Wright, III\*** ([wrighto@cedarville.edu](mailto:wrighto@cedarville.edu)), Department of Science and Mathematics, 251 N. Main St., Cedarville, OH 45314. *Juggling as an Introduction to Mathematical Thinking*.

Simple juggling sequences provide an engaging demonstration of important aspects of mathematical thinking for liberal arts students with little or no background in rigorous mathematics. The process of modeling simple juggling patterns using periodic sequences of natural numbers illustrates the power of mathematical representation and logic to classify those periodic sequences which are actually jugglable. As a result of the juggling demonstration, students use principles of mathematical modeling such as abstraction, simplification and analysis. Students also learn about the mathematical concepts of sequences, periodicity, equivalence, classification and conditional sentences. (Received September 13, 2013)