

1096-F1-2267 **Teresa D Magnus*** (tmagnus@rivier.edu), Dept. of Mathematics & Computer Science, Rivier University, 420 S. Main Street, Nashua, NH 03060. *Putting Together the Puzzle: Understanding Linear Independence, Spanning, and Bases via Group Exploration.*

The key concepts of linear independence and spanning sets are often challenging for students in Linear Algebra. In fact, since they often occur together in the course timeline, students tend to blend them together and need extra guidance in recognizing the distinct characteristics associated with each. The presenter will share a two-part group activity used in her linear algebra class to encourage students to delve deeper into these important topics, first by examining examples to determine when shortcut procedures are possible and then by using puzzle cards to identify under what circumstances one can claim a set of vectors is linearly independent (or dependent) and when it spans (or does not) span \mathbb{R}^n . (Received September 17, 2013)