Florida PROMiSE: How much Physics can one teach in two weeks?\textsuperscript{1} SELMAN HERSHFIELD, MARK MEISEL, Dept. Physics and NHMFL, Univ. Florida, JAMES BROOKS, Dept. Physics and NHMFL, Florida State Univ. — The Florida PROMiSE program is a set of intensive two week institutes designed to improve the science and math knowledge of K-12 teachers. Given the brevity of the workshops compared to an ordinary science class, one may ask what Physics can one effectively teach in two weeks. Based on our experience teaching K-8 teachers in a Force and Motion and in a Matter and Energy institute last summer, there were some topics which are accessible to well motivated participants with some prior background, and there are other topics which were not accessible. The topics which the participants were able to learn included: the qualitative relationship between position, velocity, and acceleration, the vector nature of forces including force diagrams, conservation of energy and different forms of energy, and the difference between random and systematic errors in scientific experiments. Topics involving mathematics such as breaking forces into components using trigonometry or using log-log plots to determine power laws were difficult to teach in two weeks given the background of the participants.

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