Tetyana Berezovski (tberezov@sju.edu), St. Joseph’s University, Department of Mathematics, 5600 City Ave, Philadelphia, PA 19131, and Diana S Cheng* (dcheng@towson.edu), Towson University, 8000 York Road, Towson, MD 21252. Using Figure Skating Activities to Develop Middle School Teachers’ Rational Number Sense.

The Common Core State Standards place emphases on middle school students’ understandings of multiple representations of ratios, rates, and proportions. Much research has documented students’ struggles with developing such conceptual understandings. In order to motivate students to overcome their difficulties with learning rational numbers, teachers must provide not only meaningful mathematical but also motivational learning environments. Figure skating can be used in interdisciplinary contexts in which rational number sense can be taught. In this presentation, we will use figure skating topics such as the International Judging System and pairs skating through the lens of proportional reasoning. We will also discuss possible ways that teachers can motivate their students to learn challenging mathematical concepts through popular sports. (Received August 14, 2012)