Allison J Dorko* (allison.j.dorko@okstate.edu), 676 Waterville Road, Skowhegan, ME 04976. Assimilation, Accommodation, and Graphing in R3.

The ability to construct a graph in R3 is important for student success in many multivariable topics, but many students struggle to create correct R3 graphs. In this talk, I will discuss students’ strategies for visualising some basic R3 graphs. I will frame the talk with Piagetian learning theory. Specifically, I will argue that characterising students’ graphing strategies in terms of assimilation and accommodation provides an explanatory mechanism for students’ difficulty visualising R3 graphs. I will conclude with instructional suggestions for helping students create correct graphs. (Received August 23, 2017)