

1135-F1-1851 **Debra K Borkovitz*** (dborkovitz@wheelock.edu), dborkovitz@wheelock.edu, and **Karl Schaffer**, karl_schaffer@yahoo.com. *A truncated octahedron in dance, art, music, and beyond.*

A graph where the vertices are permutations on four elements and the edges connect permutations that switch adjacent elements forms a truncated octahedron, isomorphic to a graph known as the permutahedron. This construction lends itself to artistic interpretation in a variety of media – one of us started with dance and the other with temari (a Japanese/Chinese art of embroidery on a sphere), as well as to interesting classroom activities. For this talk, we will survey connections between this truncated octahedron and dance, art, music, and computer science; we will also discuss classroom activities. (Received September 25, 2017)