1010-97-8 **George Baloglou*** (`baloglou@oswego.edu`), Department of Mathematics, SUNY Oswego, Oswego, NY 13126. *Wallpaper patterns and planar isometries: from art to geometry and beyond.* Preliminary report.

We advocate exposure to wallpaper patterns as a visual prelude to mathematical thinking and Euclidean Geometry. In particular, we propose a 'dynamic' understanding of wallpaper patterns through the geometrical recovery of the isometries that define them: this reduces to a closer look at the isometries between two congruent Cn or Dn sets. An unexpected perk could be the comparison of the geometrical and analytical approaches to (and results of) planar isometries: this comes as an application of geometry to algebra, rather than just the other way around. While totally elementary, such topics are not usually part of a future high school teacher's education; we suggest that they can easily be included in the curriculum. For students who have taken Abstract Algebra, we also propose a study of structure and 'genesis' of wallpaper patterns by way of isometry composition in a totally geometrical context. (Received May 19, 2005)