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**David Patrick\*** ([patrick@aops.com](mailto:patrick@aops.com)). *Socks and Swish: card games with mathematical foundations*. Preliminary report.

The card game SET is widely used in math circles to introduce participants to finite affine geometry. We will discuss two other, lesser known card games whose gameplay is similar to SET: all involve finding groups of cards that have some sort of matching property. The first game, Socks, is quite similar to SET, but Socks models a finite projective (as opposed to affine) geometry. The second, Swish, is a bit different than the other two, and (aside from the usual combinatorial questions that one can ask about such games) can be used as an introduction to symmetry groups of polygons, and more generally to groups acting on sets. Besides discussing the games and their underlying mathematics, we will discuss our observations from a March 2020 session of the San Diego Math Teachers' Circle in which these games were explored by our participating teachers. (Received February 14, 2020)