1014-05-142Dominic Lanphier and Christopher Miller (tugboat730@yahoo.com), 5 Washburn St.,
Centerreach, NY 11720, and Jason Rosenhouse and Amber Russell* (acr31@msstate.edu),
121 Girl Scout Rd., Grenada, MS 38901. The Isoperimetric Numbers of Block Design Graphs.

The isoperimetric number of a graph is a measure of the graph's connectedness. It finds numerous applications in mathematics and computer science. In this paper, we will obtain new upper and lower bounds on the isoperimetric numbers for graphs associated to block designs. We will focus particularly on the special cases of finite projective and affine planes. (Received August 02, 2005)