Anthony Tongen* (tongenal@jmu.edu), Department of Mathematics and Statistics, MSC 1911, James Madison University, Harrisonburg, VA 22807. Patterns in Biology. Preliminary report.

If mathematics is defined as the study of patterns, biology is a discipline that provides numerous patterns for mathematical inquiry. The desire to have mathematics students observe patterns and make conjectures is a mathematicians' way of emulating the scientific method. Biologists observe and attempt to quantify what they see in nature and experiments, so there is a very nice parallel between these two seemingly disjoint disciplines. This talk will focus on the use of discrete modeling of biological phenomena to demonstrate the importance of inductive reasoning. (Received September 20, 2007)