This talk sketches a program extending concepts from spectral graph theory to cellular sheaves. Using the techniques of combinatorial Hodge theory, we produce a series of Laplacians associated to a cellular sheaf of inner product spaces whose kernels compute the cohomology of the sheaf. The spectra of these Laplacians interact in interesting ways with the sheaf structure and sheaf operations, and can represent notions of interest in applications. We will explore initial theoretical results and discuss potential applications for the theory. (Received July 24, 2018)