Let \( G \) be a graph with \( n \) vertices and at least one edge. The coloring complex \( \Delta(G) \) was defined by Steingrímsson, and is a simplicial complex that is associated to \( G \) whose \( r \)-faces consist of all ordered set partitions \([B_1, \ldots, B_{r+2}]\) of the vertices of \( G \) so that at least one of the \( B_i \) contains an edge of \( G \). Jonsson showed that \( \Delta(G) \) is a constructible complex, and the rank of the unique nontrivial homology group is \(|\chi_G(-1)| - 1\), where \( \chi_G(\lambda) \) denotes the chromatic polynomial of \( G \). Let \( H \) be a hypergraph with \( n \) vertices. In this talk, we define the coloring complex of a hypergraph, \( \Delta(H) \), and we will discuss its homology. In particular, in the case where the hypergraph is a complete \( k \)-uniform hypergraph, \( \Delta(H) \) is a shellable complex, and the rank of its unique nontrivial homology group can be expressed in terms of the chromatic polynomial of \( H \). Using the Eulerian idempotents, one can place a decomposition on this nonzero homology group, and the rank of the \( j^{th} \) component in this decomposition equals the absolute value of the coefficient of \( \lambda^j \) in the chromatic polynomial of \( H \). We also will discuss the homology of the cyclic coloring complex of a complete \( k \)-uniform hypergraph. (Received December 02, 2011)