We investigate the structure of a family $F$ of finite subsets of a set $Y=UF$, closed under union, from the standpoint of a particular semigroup of transformations acting upon $F$. The effect of a transformation on a set in $F$, if any, consists in adding or removing some minimal set, which results in forming some other set in $F$. In this framework, we show that sensible parameter of 'dimension' of $F$ can be defined, whose value is equal to the chromatic number of a distinguished graph associated with $F$. If the value of that chromatic number is $n$, then the set of all transformations can be partitioned into $n$ classes, such that within each class, the transformations are partially ordered in a consistent manner. This construction leads to an appealing coordinate representation of the family $F$. 