In this talk, I will introduce some basics notions of discrete dynamical systems such as orbits, fixed and periodic points, stable and chaotic systems. Connections between discrete dynamical systems, statistics, and neuroscience will be established. Special discrete networks in neuroscience such Catecholaminergic, Recurent Neural, and Artificial Neural Networks which play a very important role in understanding neural activity will be discussed. Special care will be given to particular cases of discrete dynamics systems in one, two, and three dimensions such as the Logistic, the Ricker, the Lorenz, the Rössler, the Fitzhugh-Nagumo, and the Hindmarsh-Rose maps. Fractals such as the Sierpinski Triangle, the Koch curve, the Barnsley Fern, and the Appollonian Gasket will be discussed in their connection to Artificial Neural Networks.