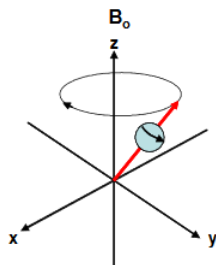# 1.5: What is Precession?

A spinning charged particle creates a magnetic field, called the magnetic moment, μ. This magnetic moment is a vector quantity that is proportional to the angular momentum: $μ = γp$. Because our nucleus has angular momentum, the magnetic moment, depicted as the red vector in the figure below, will appear to precess (or rotate) about the applied magnetic field $B_o$. This precession is analogous to the motion of a spinning top. The frequency of precession is dependent only on the type of nucleus (defined by the gyromagnetic ratio, $γ$) and the value of $B_{eff}$, as defined in Equation 4.1. The precession of a single nucleus, depicted as a blue sphere spinning about its axis, is shown here.