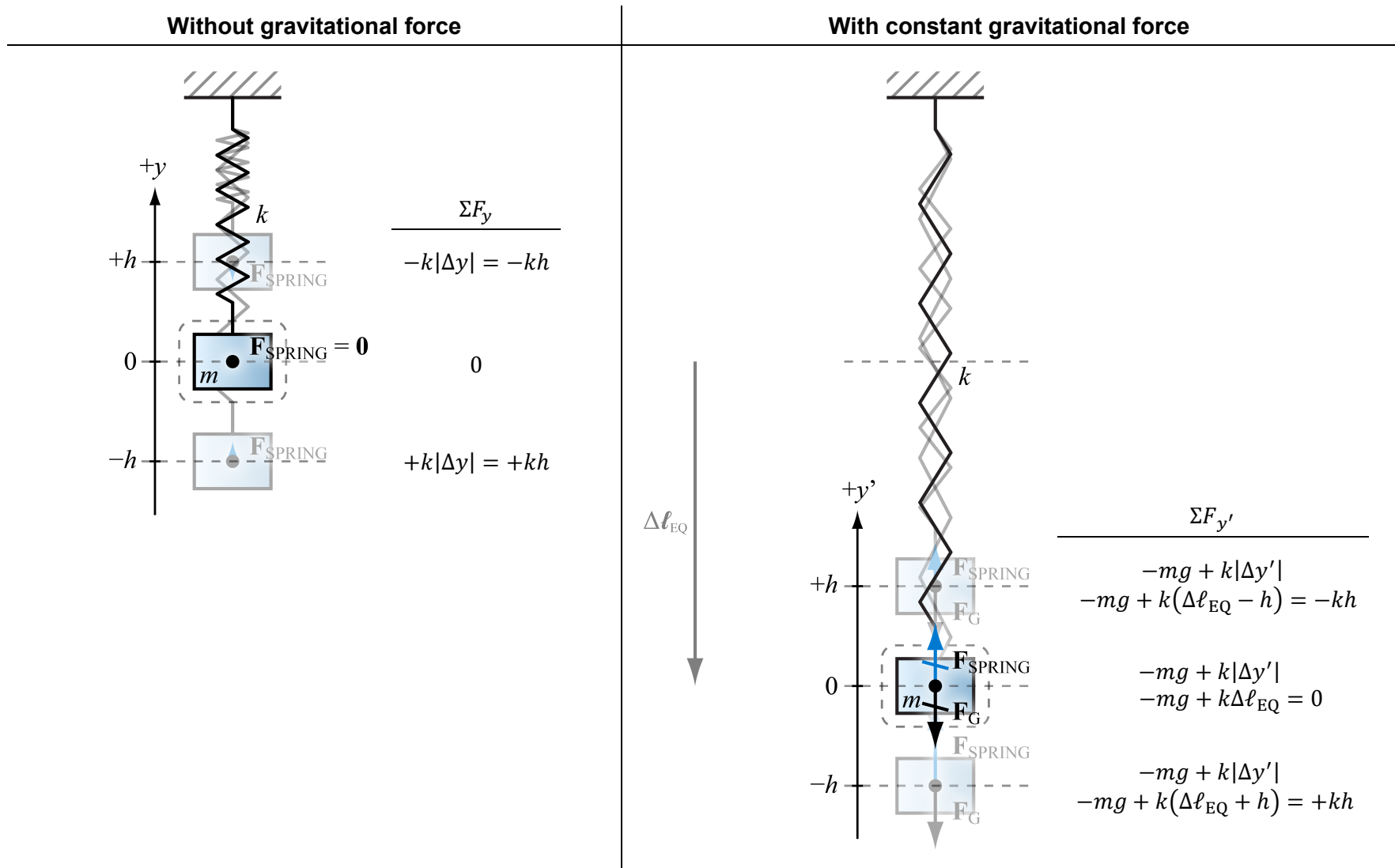


“Ignoring” gravity for SHM of a mass-on-a-spring



Period T (thus, frequency f) and graphs of K and $U_{SHM} = U_G + U_S$ as functions of time and position can be correctly obtained for a vertically arranged mass-spring-Earth system vertically suspended in a uniform gravitational field by pretending that the same mass and spring are arranged vertically in the absence of a gravitational field.