

## Flipping Physics Lecture Notes:

## Horizontal vs. Vertical Mass-Spring System

Horizontal and vertical mass-spring systems are both in simple harmonic motion.

- A vertical mass spring system oscillates around the point where the downward force of gravity and the upward spring force cancel one another out.
- The restoring force for a horizontal mass-spring system is just the spring force, because that is the net force in the x-direction.
- The restoring force for a vertical mass-spring system is the net force in the y-direction which equals the spring force minus the force of gravity.

