# Chapter 2: Motion

Section 3: Acceleration

Acceleration: the rate of change of velocity
- When the velocity of an object changes, the object is accelerating
- acceleration (m/s^2) = $\underline{\text{change in velocity (m/s)}}$ = $\underline{\text{final – initial}}$
  - time (s)   time
- Speeding up = velocity and acceleration are in the same direction
  - o Acceleration is positive
- Slowing down = velocity and acceleration are in opposite direction
  - o Acceleration is negative

Velocity/speed-time graphs
- The slope of the line is equal to acceleration
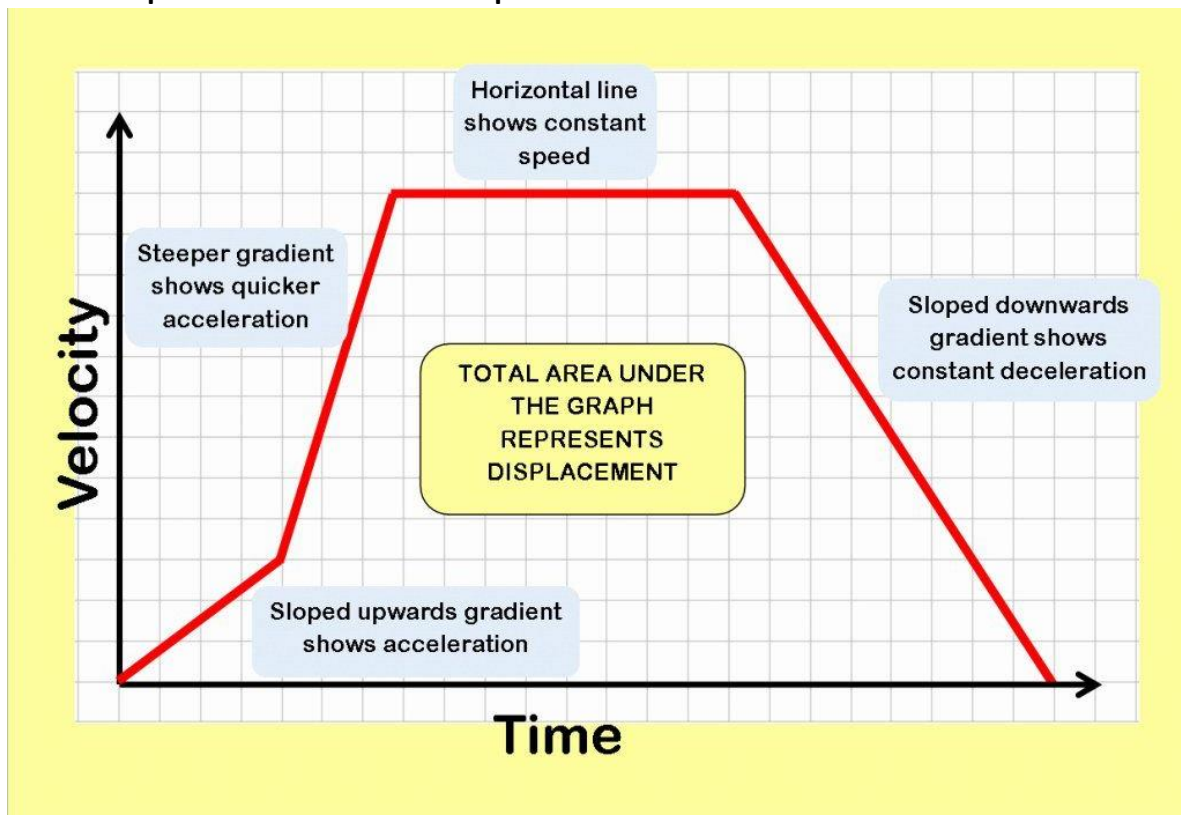
Motion in 2-dimensions: we will skip this as it fits into physics better
- Examples: circular (cup & water) and projectile motion (2 balls)