# Science 10

# Physics Formulas and Units

$$v = \frac{d_{final} - d_{initial}}{\Delta t} \qquad v = \frac{\Delta d}{\Delta t}$$

$$\text{Slope} = m = \frac{rise}{run}$$

$$a = \frac{v_{final} - v_{intial}}{\Delta t} \qquad a = \frac{\Delta v}{\Delta t} \qquad v_f = at + v_i$$

$$F = ma$$

$$W = Fd$$

$$\Delta E = W$$

$$E_P = mgh \qquad E_k = \frac{1}{2}mv^2 \qquad E_T = E_P + E_k$$

$$\%\ \text{efficiency} = \frac{W_{output}}{W_{input}} \times 100\%$$

F = Force (N)

W = Work (J)

E = energy (J)

m = mass (kg)

v = velocity (m/s)

a = acceleration ($m/s^2$)

t = time (s)

d = distance (m)

h = height (m)

g = acceleration due to gravity = 9.81 $m/s^2$

***Use for scrap paper if you wish.***