Today's Objectives:
Learn each of Newton's 3 Laws
1st Law (Inertia): Objects at rest, stay at rest. Objects at CV stay at CV unless a net force acts on it.

\[ a = \frac{\text{EF}}{m} \]

\[ \text{EF: Net Force} \]
\[ m: \text{Mass (kg)} \]

2nd Law (Acceleration)

3rd Law (Reaction): Every action force has an equal and opposite reaction force.
1st Law
Inertia (aka mass) = Resistance to Acceleration

Newton's First Law of Motion

An object at rest will remain at rest...

Unless acted on by an unbalanced force.

An object in motion will continue with constant speed and direction,...

...Unless acted on by an unbalanced force.
2nd Law

Net Force \[ \downarrow \]
\[ a = \frac{\Sigma F}{m} \]

Accel
3rd Law  Action & Reaction  

Forces have to be the same.  No exceptions!