

## Force Changes Velocity: Background

We return to Newton's 2nd Law

$$\sum \vec{F} = m\vec{a}.$$

Acceleration is a change in velocity over a change in time. When forces are applied to an object, the object should change its speed. This equation shows that the change in velocity is proportional to the force, thus as the force is increased, the change in velocity is increased. It is like the more you push in the gas pedal on a car, the faster you will make the car go. The lab will investigate this principle.