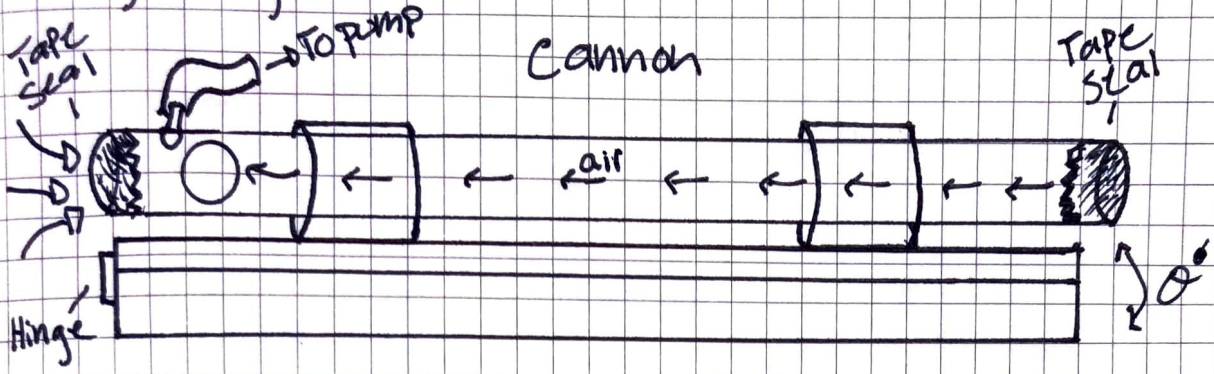
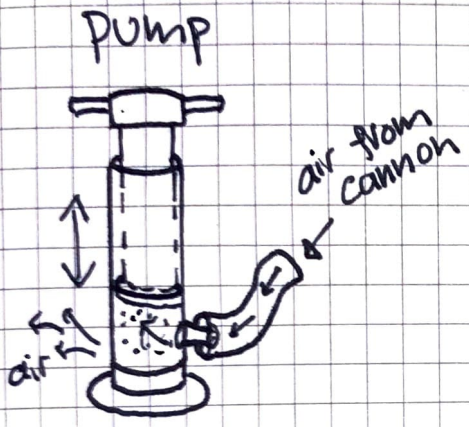
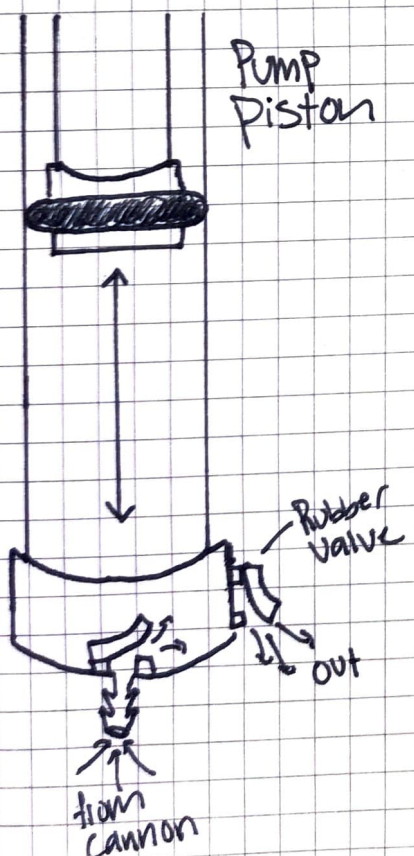
Ping Pong Vacuum Cannon 5/16/15







① A Vacuum is created in the cannon by removing air from the pump.

Without air, the ball has no air resistance to resist acceleration

② The back seal is broken, accelerating the ball with ~14 psi from atmospheric pressure

lack of air in cannon causes air to burst into the tube and accelerate the ping-pong ball to ~300 mph before leaving the barrel

③ The pong ball exits at a fast velocity but is quickly slowed as soon as air resistance is re-introduced outside of the cannon.

Results:

A perfect vacuum was not achieved by the pump's design at its seals. The ball was launched as expected but at a lesser velocity due to partial air resistance and a force smaller than atmospheric pressure.

William Greenfield 5/31/15