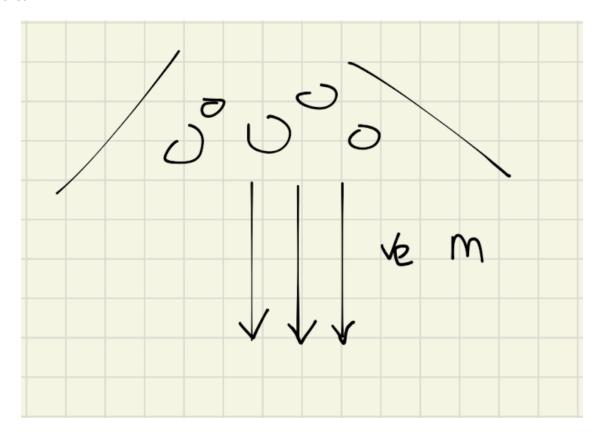
How do rockets work? They work by Newton's Third Law. Force applied over time gives you impulse, which is momentum.

1 | Setting Up

We will generally have a bunch of mass, and to get ahead you are throwing mass out the bottom of the rocket



The momentum $(V_e m)$ that you lost is then propelling the rocket forwards.