

## Newton's 1<sup>st</sup> Law:

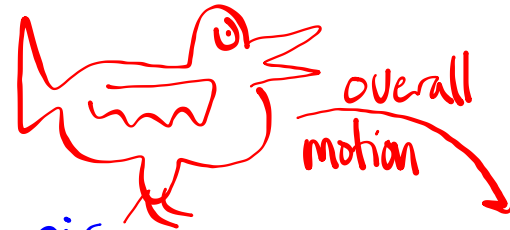
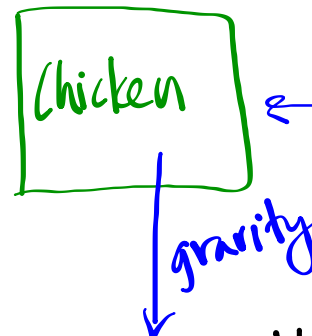
- It takes a net force to cause acceleration
- A Free-body diagram is a tool you can use to make some predictions (shows all the forces acting on an object)

picture (not a FBD):



car stops —  
what happens to  
the chicken?

Free-body diagram



- the chicken will slow down (air resistance)
- the chicken will accelerate downward