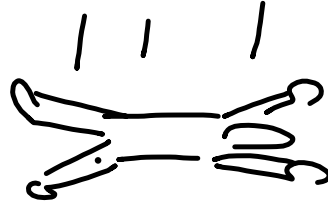
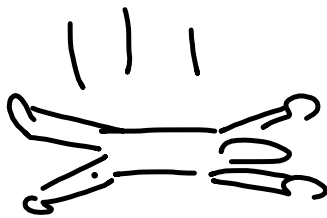
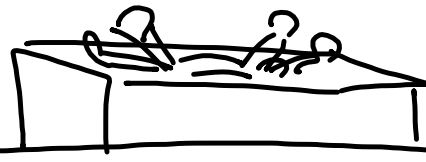


**What is the secret of a safe landing?**



Ouch!



Poof!



**"Absorbs the force"**

Don't say it. It's a bad analogy.

Force is not water and padding is not a sponge.

Another way to think about  
speeding something up or  
slowing it down

$$\mathbf{Impulse = (Force)(time)}$$

## The Forgotten Factor: Time

$$F \times t$$

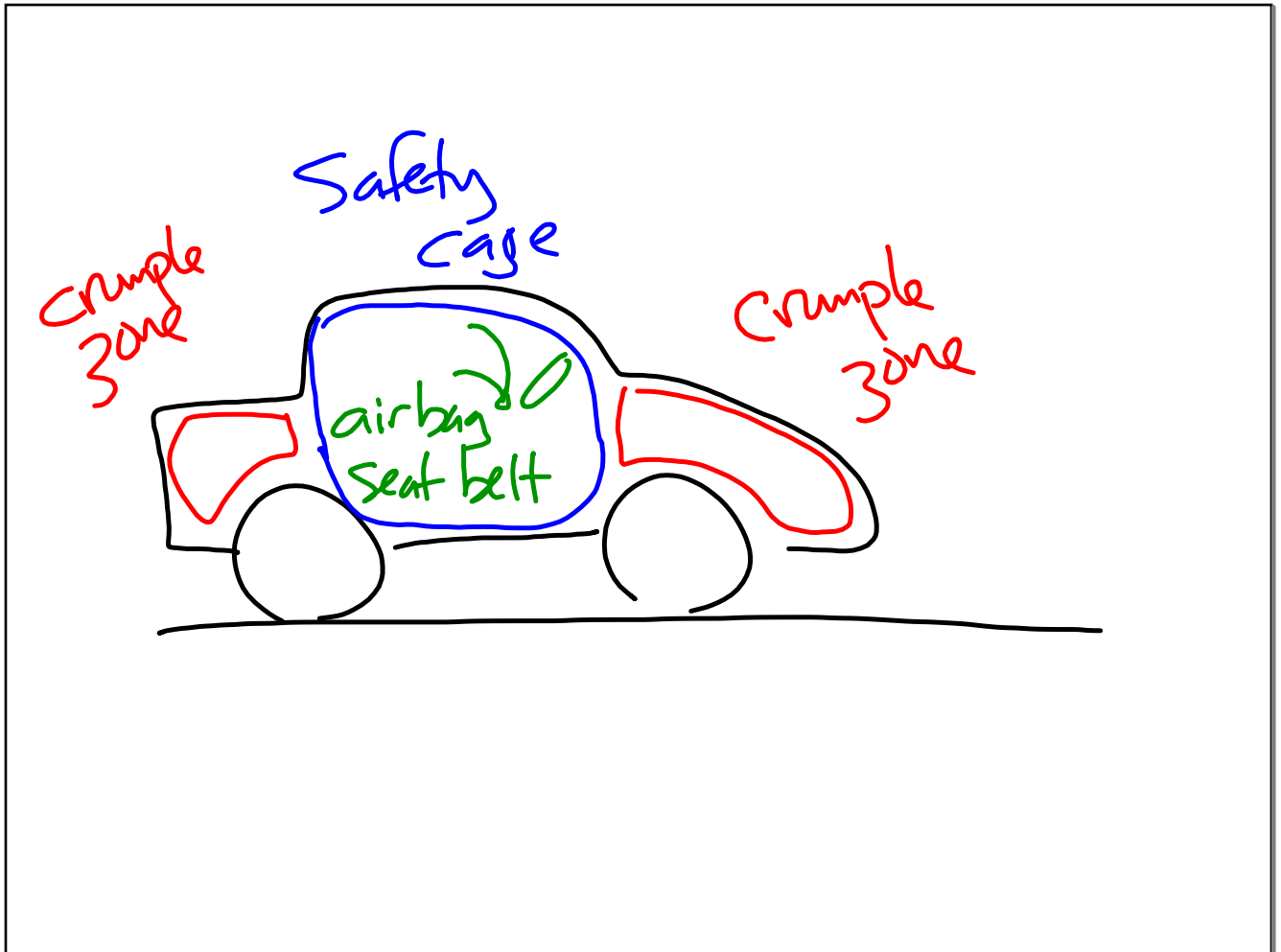


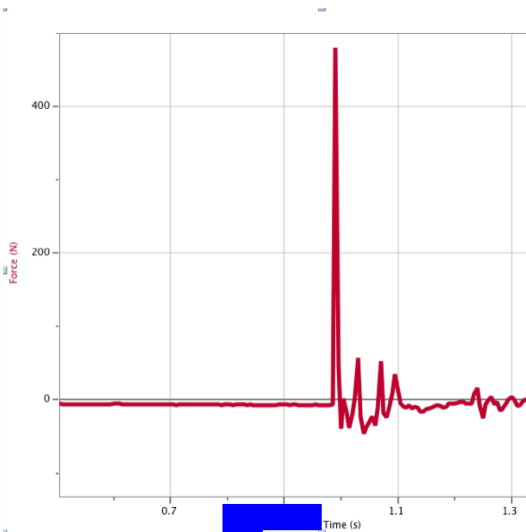
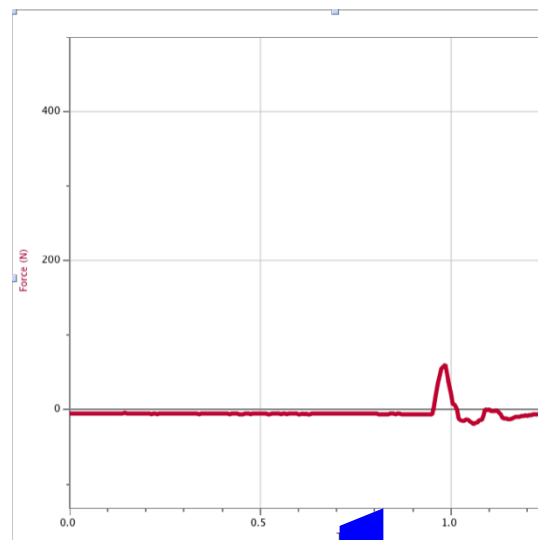
Short Time  
Big Force

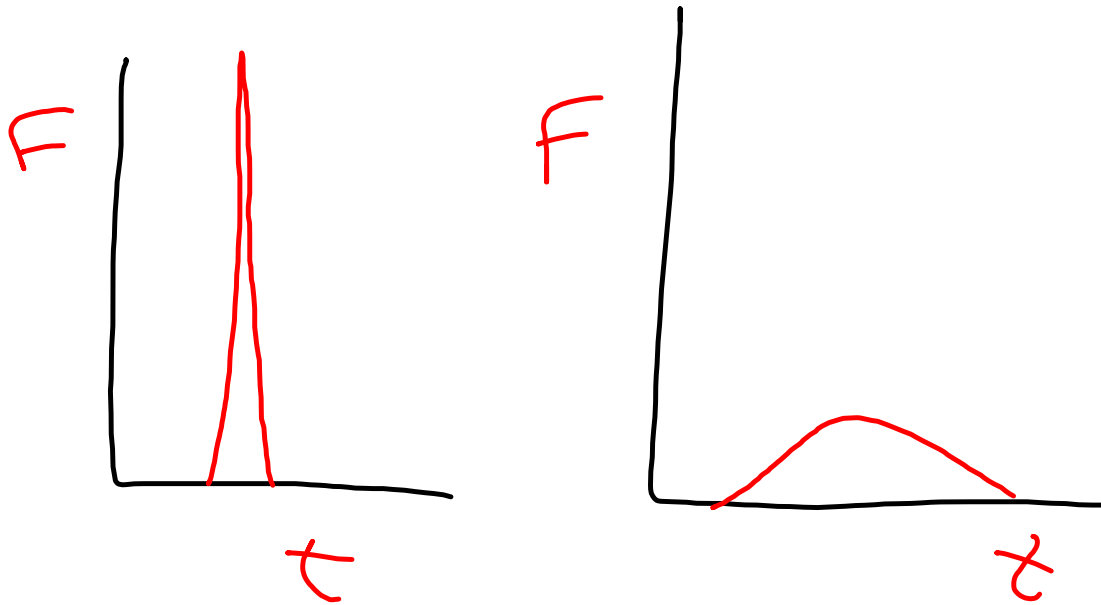
$$F \times t$$



Long Time  
Small Force



**Same object stopped from the same speed****F t****F t****Same Impulse!**

**Same object stopped from the same speed**

Same impulse means same area under the curve.  
Same stopping power.

