

**Newton's Laws, by Walter Smith & Marian McKenzie, 9-05  
(Tune: Funiculi, Funicula)**

**“A thing at rest will stay at rest,” says Newton.  
That’s his first law. That’s his first law.  
And some point out this only is transmutin’  
His second law, but that’s no flaw.  
‘Cause Newton’s second law says  $F$  is  $m a$   
If there’s no force, no  $a$  of course!  
Acceleration zero means we can say  
No delta- $v$ , so there you see!**

Chorus tune:

**Velocity depends upon your frame.  
At rest or moving, they’re really just the same!  
A tree for me stands still you see  
But from a train it moves with  $v$ !  
Newton’s 1 -2-3  
His laws are good for you and me!**

**“Each action has an opposite reaction” --  
Law number three confuses me.  
Both opposite and equal, this abstraction  
What does it mean? It seems obscene!  
Well, here’s the key that gives you knowledge ample:  
To be exact, the forces act  
On different objects and here’s an example:  
If I touch you, you touch me too!**

Chorus tune:

**If a horse starts pulling on a cart,  
The cart pulls back on the horse in equal part.  
The horse, of course, has no remorse,  
Because it feels a forward force  
From the ground upon the horse,  
As Isaac Newton would endorse!**