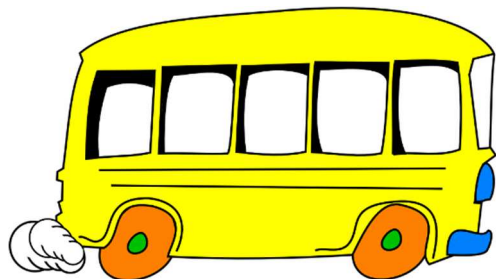


## EXAMPLES OF NEWTON'S 1<sup>ST</sup> LAW

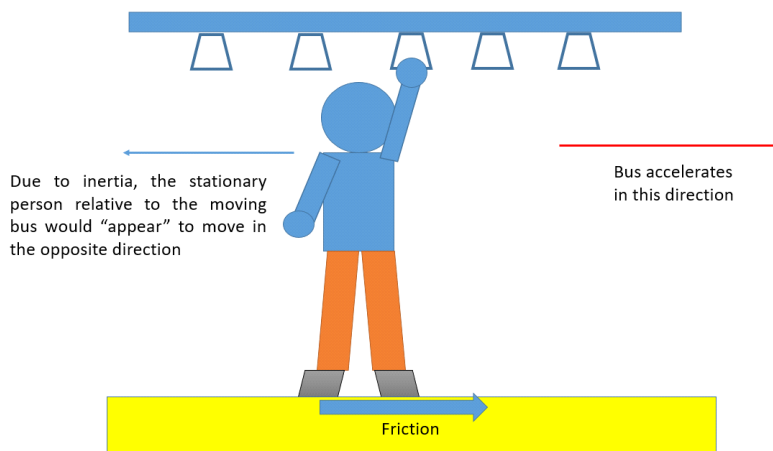
### 1. Travelling in a vehicle



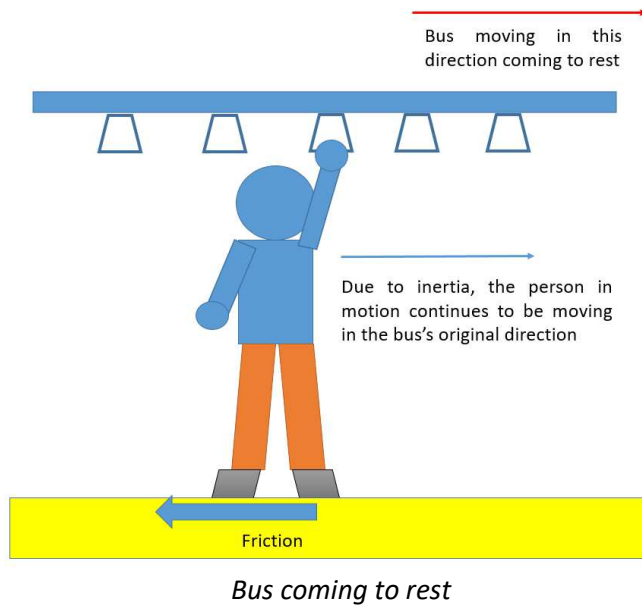
A person in the bus or travelling in the balloon is a classic example of Newton's 1st law in action.

According to the law, any object that is stationary should remain at rest unless acted upon by another force. A person standing in the bus should remain stationary, while continue to move when the bus start or stop.

- The force responsible for the motion is in fact the **frictional force** between the floor of the bus and the feet of the person.



*Bus accelerating from rest*

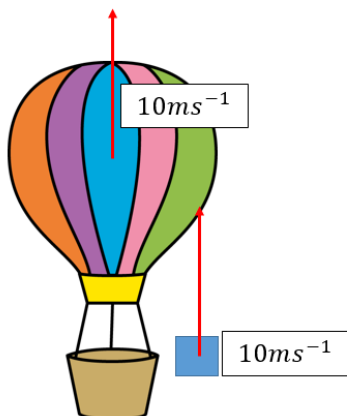


In fact, the speed of the man would have been the same as the speed of the bus before a deceleration happens.

Thus,

- The speed of any object inside a moving vehicle **MUST** always be equal to that of the moving vehicle's

**What does the above implies?**



This implies that any object that leaves a moving vehicle, should have the **SAME** velocity as that of the moving vehicle before leaving it.

Therefore, if an object is dropped from a hot air balloon, its initial speed should be the same as that of the hot air balloon, as illustrated on the left.