Newton's First Law – Alternative Statement In the absence of external forces, an object at rest remains at rest and an object in motion continues in motion with a constant velocity. Newton's First Law describes what happens in the absence of a force. Does not describe zero net force Also tells us that when no force acts on an object, the acceleration of the object is zero Can conclude that any isolated object is either at rest or moving at a constant velocity The First Law also allows the definition of force as .that which causes a change in the motion of an object