



Challenging students' conceptions about the phenomena of inertia

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Abstract

Newtonian mechanics is considered as one of the difficult topics in physics. Students usually find it difficult to connect the phenomena of forces with Newton's Laws of motion. In particular, Newton's First Law of motion (Law of Inertia) seems to defy students' common sense of motions because the need for a force to overcome the frictional force in a constant speed motion has shaped their misconceptions. This article introduces three experiments for teaching the concepts of Newton's First Law of motion. These experiments have been tried out in the lessons of 384 students in eleven Grade-8 classes. The teachers conducting these lessons were highly satisfied with the learning outcomes achieved by conducting these experiments (Kwok, Chan & Mung, 1999).