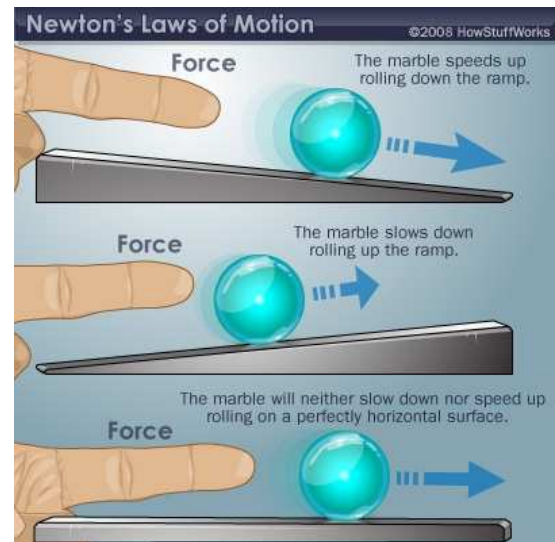


EXAMEN : baccalauréat Général – Série S –SVT ou S-SI	SESSION 2014
EPREUVE : Evaluation spécifique de Langue en section européenne	
PHYSIQUE – CHIMIE en langue ANGLAISE	
THEME : MECANIQUE : Lois de Newton	Sujet n°02

Newton's Laws ?

Imagine that the ramps are infinitely long and infinitely smooth. You let a marble roll down the first ramp, which is set at a slight incline. The marble speeds up on its way down the ramp. Now, you give a gentle push to the marble going uphill on the second ramp. It slows down as it goes up. Finally, you push a marble on a ramp that represents the middle state between the first two -- in other words, a ramp that is perfectly horizontal. In this case, the marble will neither slow down nor speed up. In fact, it should keep rolling. Forever.



AFP/Which person in this ring will be harder to move? The sumo wrestler or the little boy?

Physicists use the term **inertia** to describe this tendency of an object to resist a change in its motion. The Latin root for inertia is the same root for "inert," which means lacking the ability to move. So you can see how scientists came up with the word. What's more amazing is that they came up with the concept. Inertia isn't an immediately apparent physical property, such as length or volume. It is, however, related to an object's mass. To understand how, consider the sumo wrestler* and the boy shown below.

*wrestler : lutteur.

Adapted from <http://science.howstuffworks.com/innovation/scientific-experiments/newton-law-of-motion1.htm> Present and comment on this document

Questions :

1. Present and comment on this document.
2. Do not forget to focus on the Newton's laws involved in this document.
3. Do you know any other topic where Newton has been a very famous scientist?