



Physical World Concepts study of Newtonian Laws of motion and Energy

Students will be studying Newton's three laws of motion (Law of Inertia, Law of Acceleration, Law of Action – Reaction) and will also be studying how forces work within those laws. Students will be measuring forces, manipulating surfaces and or weights that affect moving objects and their movement, and will understand its effects on different types of moving objects/vehicles.

In one procedure, they created a graph showing the relationship between mass and acceleration. A cart is loaded with weights and pulled across a table by another weight hanging off the table.

In another procedure, they designed a balloon-powered cable car and graphed the relationship between the size of the balloon and the distance it travelled. This allowed them to think about forces in terms of action and reaction.

four main parts:

- learn that objects have inertia using pennies,
- learn how to use a spring scale to measure force,
- learn that increasing the mass of a cart will slow its acceleration, and
- learn about action and reaction by building a balloon-powered cable car.

