MUDS

MEWTON'S THIRD LAW

PHYSIC REPORT PROJECT

Physic is life

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Objective

The purpose of this project is to study the Newton's Third Law, which is about action-reaction. Therefore, we create a model in which it can profoundly show how Newton's Third Law works.

Abstract

In this report, it will contains informations and the ways we built the model based on the knowledge that we researched from reliable site. Our group purpose emphasises on what we had learnt in class which was was mainly to focus on Newton's law of motion. Our group came up with the idea that in order for us to demonstrate something, we must make it clear and easy to understand. So we decided that we had to build an object that can demonstrate the Newton's third law: action equals reaction.

Introduction

Motion is everything. In every second, a billion of forces are acting upon objects. For example, a car is moving. In this case, the force acting on the car is air-resistance, which is friction. Friction can be divided into two, kinetic and static friction. However, in this experiment, we will not talk about these two friction. Instead, we will explain you about Newton's Third Law of motion, which is action and reaction forces. First, let's talk about who invented this law.

Sir Isaac Newton is the one who created this law. He is an English mathematician and astronomer. He invented law according to our world. Consequently, there are three laws that he invented. First, Newton's First Law stated that if the net force is zero, then the object is moving at constant speed or at rest. Second, Newton's Second Law stated that force equals mass times acceleration. Lastly, Newton's Third Law, which in this article we are going to talk about it, stated that if the force is acting upon an object, there must be another acting on it too in the opposite direction and in equal magnitude.

In this experiment, we used Newton's Third Law for our model. As we have been studying Newton's Third Law for a long period of time, we decided that we will create a car model in which we use a balloon as a motor to move a car forward. It is related to Newton's Third Law in that the action force is the air trapped in the balloon, releasing from a ball, and the reaction force is that the car is moving forward. Basically, when the balloon releases a gas, it creates a movement for a car.

Equation:

Action = reaction

By blowing the air in the balloon through the straw pipes the car will go forward when air that comes out.

Materials:

Water bottle

Bottle caps

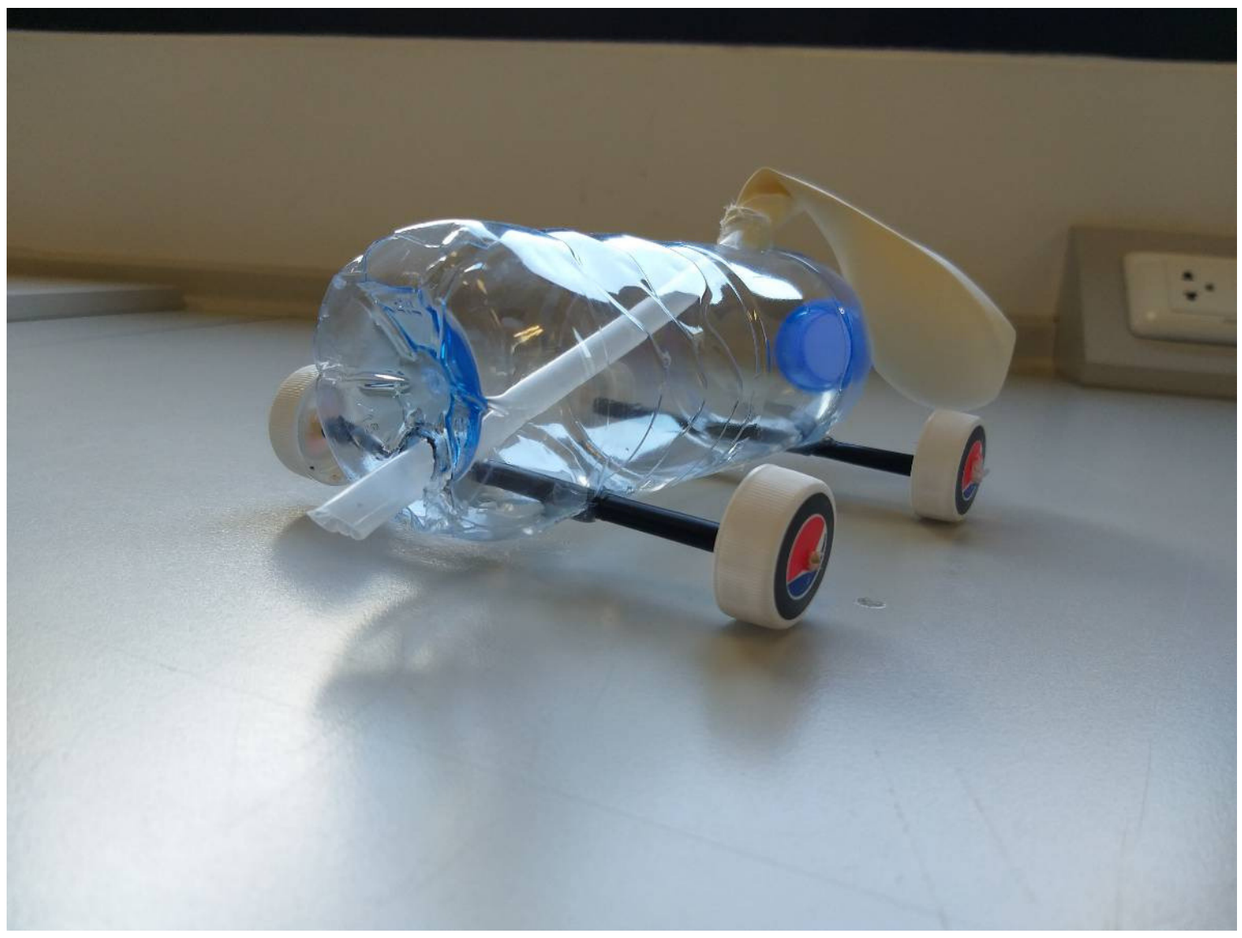
Glue gun

Stick

Straw

Balloon

Pictures of our work



Conclusion

As stated our purpose to study the Newton's Third Law, which is about action-reaction. Therefore, we create a model in which it can profoundly show how Newton's Third Law works. The model reveal that when we blow air into the balloon that we had securely glued on the bottle, the air will act as the action when it comes out of the balloon. It will act its force on the bottle and will cause the bottle to move forward, in the opposite direction. The action in this experiment is the wind blowing action force on the floor, the reaction of this is the force that the floor is doing to the car causing the model to accelerate forward in the opposite direction from the direction that the wind is blowing.

Reference

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