

Ng: Good morning, Mr. Lyons. Today is our annual Physics short talk. What's the topic we are going to talk about?

Lyons: I found something very funny. Let's see how we can apply the knowledge in Physics to explain it.

Ng: What's that?

Lyons: I rub a nylon ball with a woolen cloth. And then I rub a plastic tube in a similar way with the same woolen cloth. Let's see what'll happen when the tube is placed close to the nylon ball.

Ng: Wow! You can make the nylon ball fly in the air by the plastic tube. You can even make it fly to anywhere you want. It's amazing. It's cool!

Lyons: There's more. Let's see what happens when I put the rubbed plastic tube close to a metal can.

Ng: Wow! They can move towards the plastic tube. It's marvelous! It's awesome!

Lyons: Mr. Ng, can you apply what you've learnt in Physics to explain these two phenomena?

Ng: Yes. The two events are related to a topic in Physics known as electrostatics. In electrostatics, we have a very basic principle about charges. There are two kinds of charges in the universe. One is positive while the other is negative. Their behavior can be summarized in two statements. The two statements are "Like charges repel" and "Unlike charges attract".

Lyons: I see. "Like charges repel" and "Unlike charges attract". Let me explain the first phenomenon using the principles.

After being rubbed, the nylon ball and the plastic tube carry the same kind of charges. Since "Like charges repel", the nylon ball is repelled by the plastic tube and that's why the nylon ball flies high in the air.

Ng: Exactly. Mr. Lyons, you are a genius. In the second phenomenon, when a charged plastic tube is placed close to a metal can, unlike charges will be induced to the side of the tube. Since "Unlike charges attract", the can is attracted towards the plastic tube.

Lyons: I see. One can use simple theory in Physics to explain different phenomena observed in our daily lives. Physics is not as difficult as what I think.

Ng: Right. I hope that WYY students would have more interests in their studies and would apply what they've learnt in their daily lives and explore the world further. That's the end of our short talk.