Make two straws attract each other.

Material:

- rope
- two straws
- a cap, scarf or another textile made of wool

Instruction:

Tide the rope to the straw. Take the rope and hold it or ask a friend to hold it for you. You can also place the rope under a book or anything. Just make sure that the straw can move without touching anything else.

Rub the both straws with the cap.

Take the straw without the rope and come closer to the other straw. Make sure that they do not touch each other. What happens?

Explanation:

As you learned in the wiki-article: " Electric Charge ", the charge of an object depends on the amount of unit charges (like electrons), which are part of the object. Especially electrons are a good example for unit charges, because they can move. Electricity is a stream of moving electrons . This characteristic of electron, will be used in our experiment. Before rubbing the straw, both straws are do not influence each other. But after rubbing the straws attract each other. Therefore the straws are charged. In order to be charged they have to change their amount of charges particles .

By rubbing the first straw, we make the straw loose some electrons . We take off some electrons. Therefore the first straw was changes it mode from neutral to positive, be cause we remove negative particles and the positive particles are in the majority. The cap gained some electrons and that's why it is negatively charged . By rubbing the second spoon, we transport some of the electrons to the second spoon, be cause differently charged objects equalize their charge, when they are connected. (That's why you are suppose to to keep a gap between both straws.) In fact some of the electrons of the one

straw are after part of the other straw. The cap can be compared to a spoon, which transports some of the electron to the second straw.

Now both straws have a different charge and push each other, when they close to each other. (When you connect both straws the different concentration of electrons , will be equalized by a small electric current .