

Educational Innovations[®]

VAN-200

FunFlyStick™

Static Electricity Activities with the FunFlyStick

By Ron Perkins

I. Move an Empty Soda Can Without Physically Touching the Can!

Materials: FunFlyStick™; empty 12 oz. soda can

Procedure:

- A. Place an empty soda can on its side on a level surface.
- B. Activate the Fun Fly Stick™ and hold the charged wand parallel to the can. As the wand is moved closer to the can, the can will start to roll toward the Fun Fly Stick™. Try to keep the Fun Fly Stick™ separation distance equal and ahead of the movement.

Explanation:

The charged FunFlyStick™ induces an opposite charge in the empty soda can closest to the wand. The can becomes attracted to the Fun Fly Stick™.

II. Determine the Type of Charge on the FunFlyStick™!

Materials: FunFlyStick™; piece of PVC Tubing (ca 25 cm x 2.1 cm); piece of wool cloth (ca 10 cm x 10 cm); roll of transparent tape

Procedure:

- A. Affix the end of a freshly pulled piece of transparent tape to a table so that most of the tape hangs in the air.
- B. Vigorously rub a small length of PVC pipe with a wool cloth and bring the pipe close to the tape without touching it. Notice whether the tape is attracted (exhibiting a positive charge) or repelled (exhibiting a negative charge) by the negatively charged PVC pipe. This allows you to determine the charge on the tape.
- C. Activate the Fun Fly Stick™ and, as you approach the tape (without touching it), notice whether the Fun Fly Stick™ attracts or repels the tape. Knowing the charge on the suspended tape from step #2, use this information to determine the charge on the FunFlyStick™.

Explanation:

As you pull a piece of sticky tape from its roll, the tape becomes either negatively or positively charged. As you rub a piece of PVC pipe with a cloth, the pipe always becomes negatively charged. Knowing that opposite charges attract and like charges repel, you can then determine the type of charge on the tape and then on the FunFlyStick™.



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