Curiosity Guide #710
Magical Science
Accompanies Curious Crew, Season 7, Episode 10 (#710)

Floating Tinsel
Investigation #6

Description
This tinsel has a mind of its own!

Materials
• Tinsel strands
• Scissors
• Plastic PVC pipe
• Felt or wool hat

Procedure
1) Tie three strands of tinsel together on each end, leaving about six inches between the knots.
2) Trim off the excess strands with scissors and discard them.
3) Slide your fingers lengthwise with the tinsel several times and then hold the end.
4) Rub the end of the PVC pipe with a piece of felt, wool hat, or your hair.
5) Turn the pipe on end. Drop the tied tinsel onto the pipe.
6) What do you notice?
7) Then flick the tinsel into the air and move the pipe underneath it.
8) What do you notice?
Results

Explanation
When the plastic is rubbed against the felt or wool, the pipe steals electrons and becomes more negatively charged. As a result, the electrons on the tinsel move away from the negatively charged pipe, leaving the closer side positively charged. The positive and negative attract, making the tinsel stick, and picking up additional electrons. Now, both the tinsel and the pipe are negatively charged, so that when the tinsel is flicked in the air, the two objects repel. Because the tinsel is so light, the repulsive force can suspend the tinsel in the air.

Try this. Show your friend a piece of ribbon that’s looped around the handle of a cup and held between your thumb and index finger. Move your hand back and forth to demonstrate that the ribbon is looped around the handle. On the count of three, quickly pull your hand away from the mug and watch the ribbon pass through the handle. To create this illusion, fold the ribbon in half and pass the loop through the handle back on itself. Hide the end under your thumb. When moved quickly, the loose end will slide out and zip around the handle. Voila!

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