

Snap Crackle Jump

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Meant for
Grade K-3
(age 5-7).

This
experiment
is edible.
An adult
should be
present.

Overview:

Rice Krispies seem to jump and float from a table top to an overlying plate of glass or plexiglass rubbed with a wool sweater to generate a net negative charge.

Equipment:

- hand full of Rice Krispies
- plate of plexiglass, foot X foot or so.
- wooden blocks, ceramic cups, or something similar to balance the plate 1-3 inches above the table (table should be non-metallic).
- wool sweater

Safety:

none that I can think of.. just have fun

How to do the experiment:

1. Place the rice krispies on the table surface.
2. Put the wooden blocks or other non-conductive materials on the table, and balance the plate of plexiglass over the table + pile of rice krispies.
3. Vigorously rub the top of the plexiglass with the wool sweater.
4. The rice krispies should slowly start to stand on end, then 'jump' from the table surface to the plexiglass and back again.

Explanation:

The effect is caused by the buildup of **static charge**. Rubbing the wool sweater on the plexiglass generates a net negative charge on the plexiglass surface. This net negative charge has the effect of **polarizing** the rice krispies on the table below, so positive charges accumulate on points closest to the overlying negatively charged plate. Unlike charges attract, and when the difference in charge has become great enough, the electrostatic attractions are sufficient to draw the rice krispies to the bottom of the plexiglass plate, against the force of gravity. The charges dissipate when the rice krispie contacts the plate. Having no further means of attraction, the now neutral krispie falls back to the surface of the table allowing the process to start over again.

Useful References:

[Static Electricity Page](#)

Further comments:

Corn flakes work well, cheerios had a negligible effect. You can also increase the distance between the plate and the table surface to see what happens.

Experiment submitted on Sun Mar 2 21:20:55 1997 by:
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