

Charged Objects

Action

Two charged balloons will repel each other

Grade Level

Grade 2 - Magnets

Materials

- Thread
- 2 balloons
- A meter stick (or broom stick)
- Wool gloves (or something made of wool)

Instructions

- Attach approximately an arm's length of thread to each balloon. Tie the ends of the thread together so the balloons are connected.
- Drape the connected piece of thread over the meter stick so that the balloons are at the same height (they should be touching). Observe that the balloons rest against each other.
- Have someone hold the meter stick and charge the balloons by rubbing them with the wool. The balloons will be attracted to the wool and will move away from each other.

Safety

No safety concerns

Hints

- The balloons may become attracted to clothing so stand back from the balloons so students can see the attraction to a wool object held close to the balloon and how they repel each other.
- The balloons should be neutral at the beginning of the experiment. If they appear to be slightly charged, touch them gently with a piece of metal.

Science Principle

The neutral balloons will rest against each other. After inducing a charge (ex. by rubbing the balloons with wool gloves or a similar wool object). The balloons then behave as magnets with the like poles pointed towards one another. This analogy is like north and north (or south and south) repelling each other. The attraction of the wool gloves is similarly explained with unlike poles. This activity demonstrates how magnet-like activity occurs even when magnets are not present.