

Electricity and Magnetism Pre-Assessment

Name _____

(Total Points: ___ / 5)

Standards Addressed: CA.MS-PS2-3, CA.MS-PS2-5

Date _____ Period _____

Permanent Magnet

CA.MS-PS2-3

1. The students learned how the poles of magnets attract and repel each other. Select all the magnet pole interactions that are correct.

Students explored forces and energy related to permanent magnets and electromagnets. The materials they used were: two bar magnets, a compass, iron filings, a large iron nail, electrical wire, a battery, and metal paper clips.

- a. North poles attract south poles.
- b. North poles attract north poles.
- c. North poles repel north poles.
- d. South poles attract south poles.
- e. South poles repel south poles.

Bar Magnets

Three bar magnets have been dropped into a glass tube. The two upper magnets are suspended above the bottom magnet. One pole has been marked as shown in the picture below.

2. Which choice illustrates the correct labels for the other north (N) and south (S) poles?

a. Option 1



c. Option 3



b. Option 2



d. Option 4



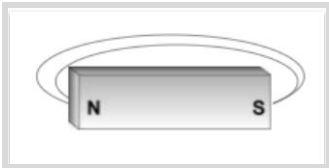
Iron Filings and Magnets

When iron filings are sprinkled around a magnet they line up with the magnetic lines of force that make up the magnetic field. The students sprinkled filings around the magnets shown below.

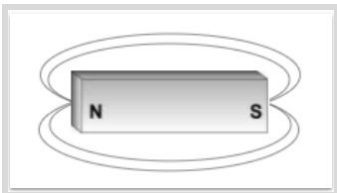


3. Which of the following images illustrate the correct lines to show the magnetic lines of force around this bar magnet that the filings revealed.

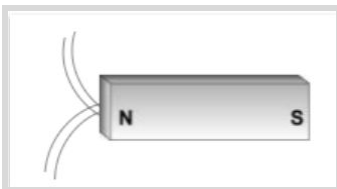
a. Option 1



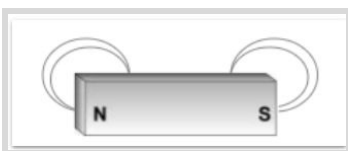
b. Option 2



c. Option 3



d. Option 4

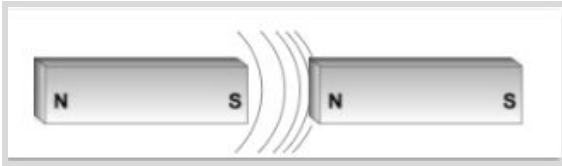


Iron Filings and Two Magnets

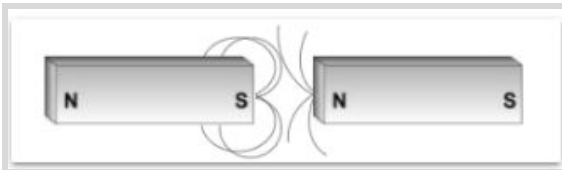
CA.MS-PS2-5

4. Which picture's lines show the magnetic lines of force between these magnets that the filings revealed?

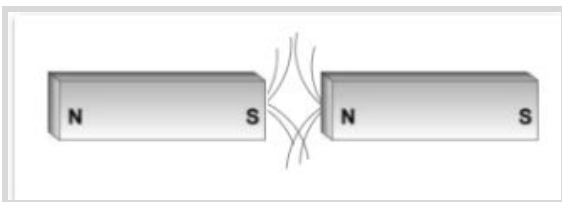
a. Option 1



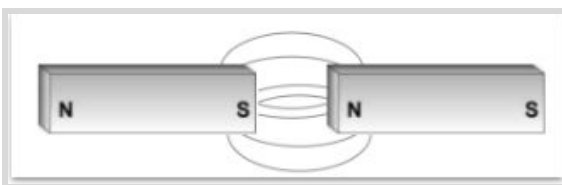
b. Option 2



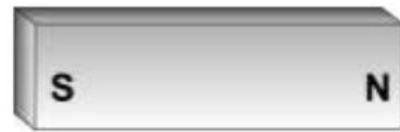
c. Option 3



d. Option 4

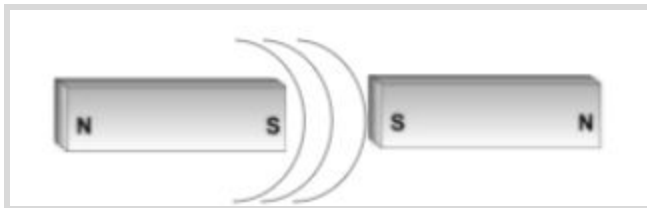


Iron filings were then dropped on these two magnets, facing a different way with their poles.

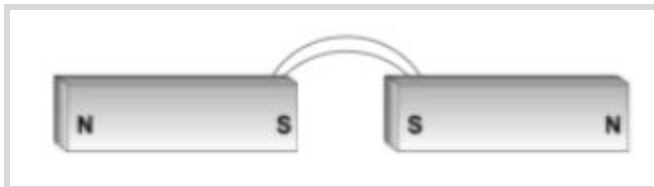


5. Which picture illustrates the lines to show the magnetic lines of force between these magnets that the filings revealed. Notice the poles are facing the SAME ones.

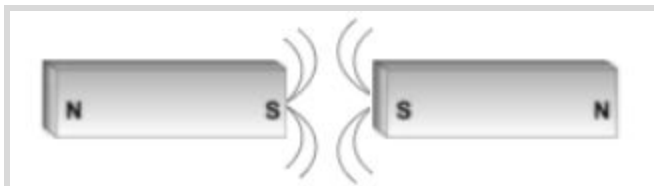
a. Option 1



b. Option 2



c. Option 3



d. Option 4

