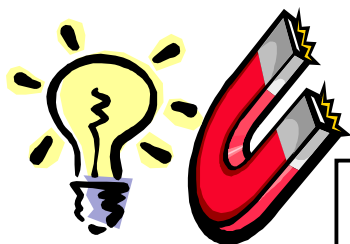


Science 10-Electricity & Magnetism

Activity 8

Activity 4B—Mapping Magnetic Fields



10

Name _____

Due Date _____

Show Me Hand In

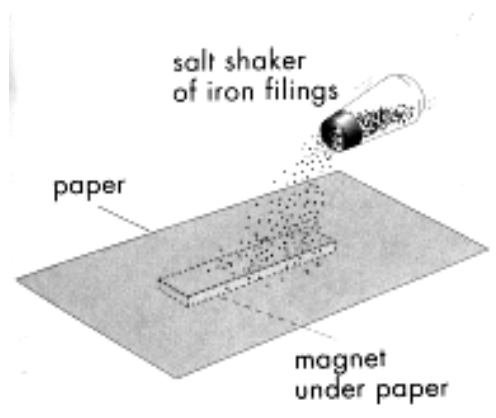
Correct and Hand In Again By _____

Purpose:

To determine the shapes of magnetic fields around various arrangements of magnets.

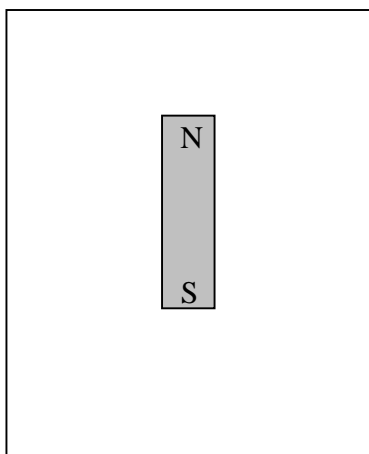
Procedure:

- For each of the following arrangements of magnets, place a piece of paper on top of the magnets and gently shake a salt-shaker with iron filings on top of the paper. Tap the paper occasionally to allow the filings to line up with the magnetic field.

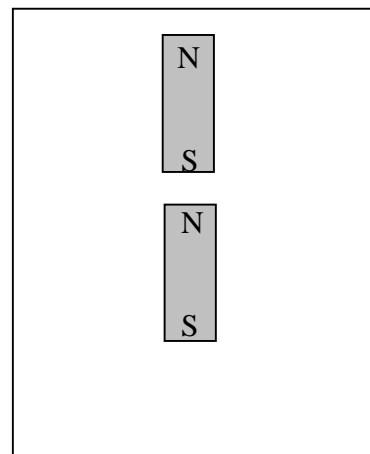


Sketch the pattern made by the iron filing for each arrangement in the following diagrams:

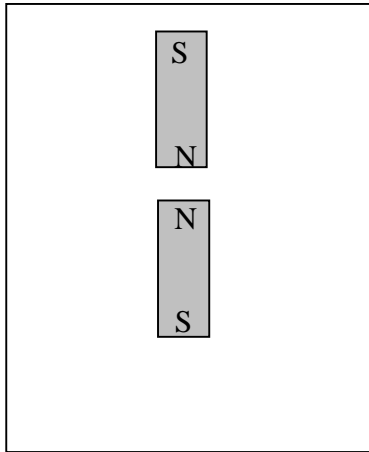
- a) A single bar magnet



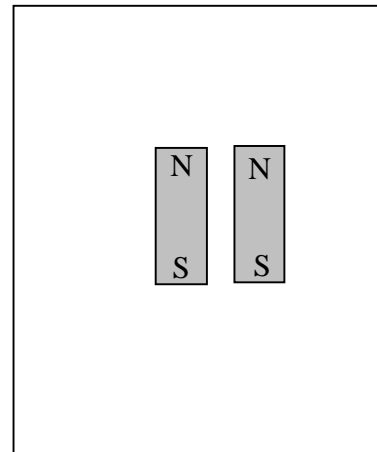
- b) Two attracting bar magnets



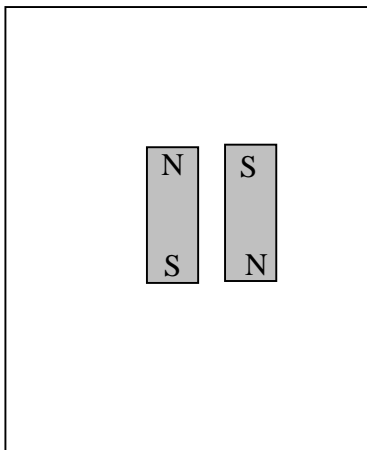
c) Two repelling bar magnets



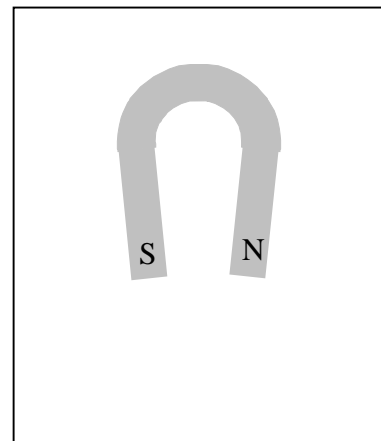
d) Two magnets side by side with like poles lined up



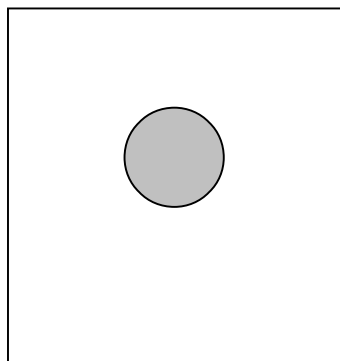
e) Two magnets side by side with unlike poles lined up



f) A horseshoe magnet



g) A circular magnet





Questions:

1. What happens to the strength of the magnetic field as you move farther away from the magnet? _____

2. Other than bar magnets, name some other things which you think may have a magnetic field around them.

3. Name six everyday items that have permanent magnets in them:
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____

4. Define a **magnetic field** - _____
