

# Invisible Force Moving Car



## Materials you will need:

- Two magnets
- Two rubber band
- Two matchbox car

## Steps:

1. Take one magnet, one matchbox car and the rubber band. Secure the magnet with the South Pole of the magnet on the top of the car towards the back of the matchbox car using the rubber band.
2. Take the second magnet and wrap the rubber band around secured at the front end of the matchbox car with the opposite pole (North) of the magnet at the front end of the car.
3. Position the second car so that it is placed behind the first car. What happens? Opposite Poles attract each other.
4. Swap the pole (magnet) around on one of the matchbox cars. Position one car behind the other. What happens? Same Poles repel or push away so the cars to not come together.

## Visual Steps:



Step 1



Step 2



Step 3



Step 4—Top View



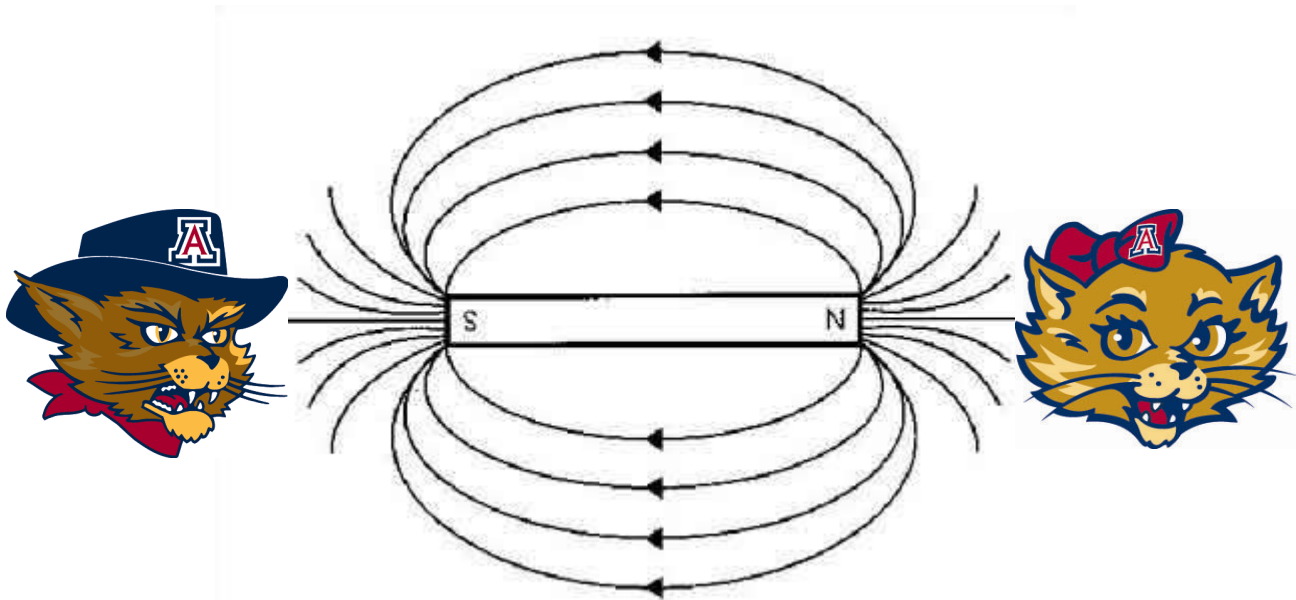
Step 4 - Side View

Have some fun with the magnetic cars. Use the magnetic set up from Step 4 (with like poles facing each other). Play a game where you set up an obstacle course and try to maneuver (steer) your car around the course with your second car operating (steering) the first car.

## How Does a Magnet Work?

The magnetic field of a magnet is the boundaries of its magnetic lines of force. These are the north to south lines in a magnetic field. Magnetic lines of force always start at the north end of a magnet and end on the south end, just like the Earth's axis. Any magnet will set itself parallel to the lines of force, which is how compasses work, and why magnets repel or attract magnetic materials, depending on the north-south position of the magnetic lines of force.

Magnetic lines of force draw near each other when they come close to the north and south poles, or ends, of the magnetic, but grow farther from each other as they move away from the poles. They do not cross over each other.



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