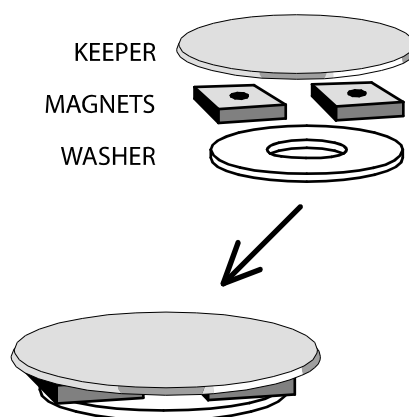


# MAGNETIC SCULPTURE

Today you will see that magnetic fields are three-dimensional, and use them to create a work of art.

**WHAT YOU NEED:** 2 latch magnets, 30 steel nuts, a magnet keeper (which is a flat metal disk), and a large washer to use as a pedestal. A ruler and a couple of bar magnets could come in handy as well.

**WHAT TO DO:** Place the magnets on the far right and left sides of the washer, with opposite faces up. (You can test this with a bar magnet. One face should attract the N pole, the other should repel it.) Set the keeper on top of the magnets. Add the steel nuts and see what shapes you can form them into.

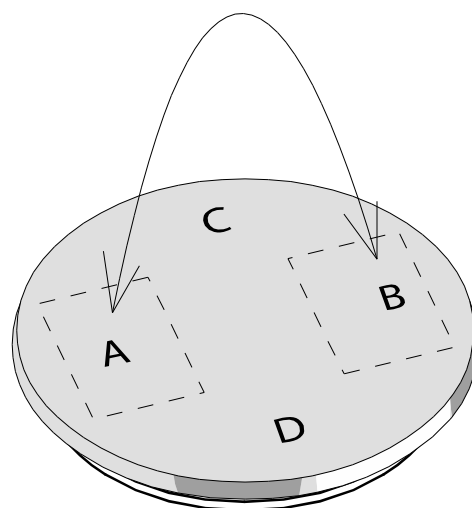


## PART 1: ARCHES

Magnetic fields go from pole to pole in big curves. If you follow these curves with the steel nuts, you can form arches. Try it!

First, try making an arch between A and B, linking the magnets. How big an arch can you make?

\_\_\_\_\_ centimeters high



Then try making an arch between C and D. Describe what happened.

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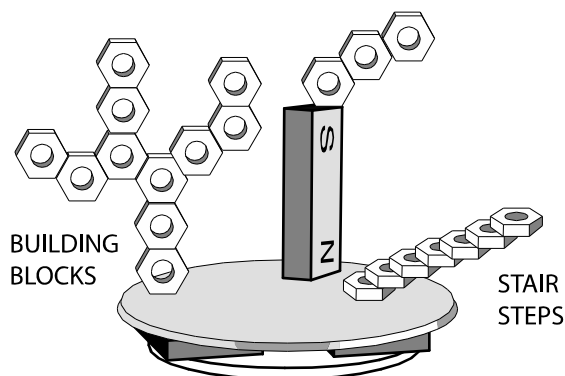


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When you didn't follow the magnetic field lines, the connections between the nuts got weak and they fell apart. What do you think would happen if you flipped one of the magnets over?

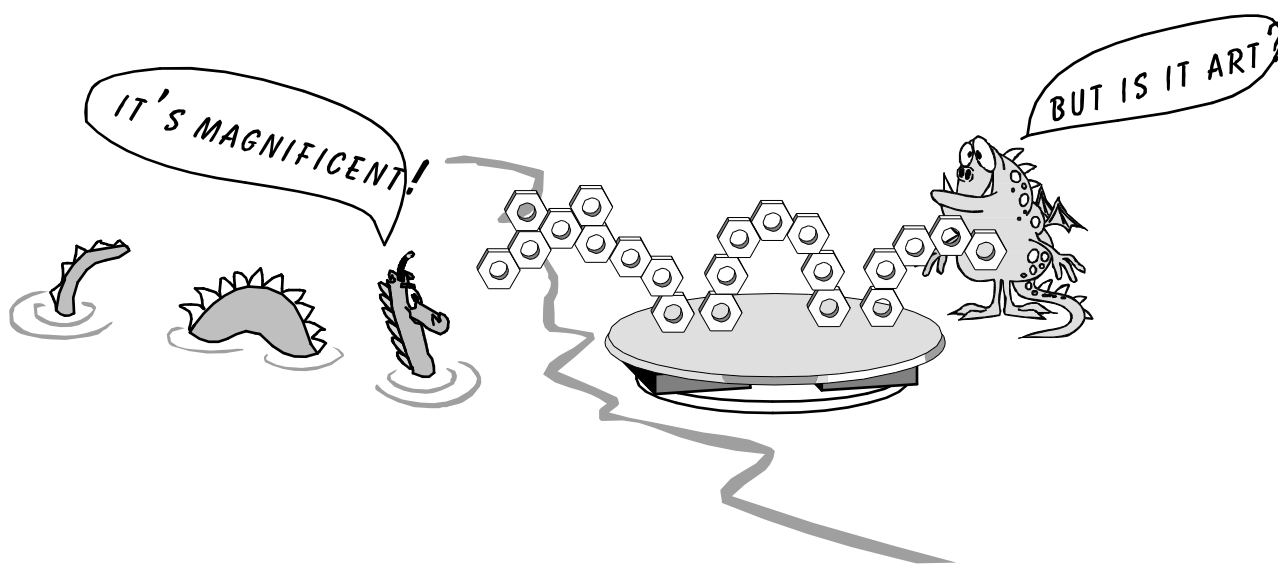
## PART 2: GETTING CREATIVE

You can add nuts onto your sculpture one at a time for amazing distances, as long as you do it along the magnetic field lines. You can add them as building blocks, or as stair steps. If you want to get really fancy, you can even add your bar magnets.



Use these techniques and your imagination to make your own magnetic work of art.

Be Creative! Be Artistic! Have Fun!



When you build a magnetic sculpture you're doing more than being creative. The sculpture helps you see magnetic field lines as they reach out in all directions, from one pole to another.