The Coin in the Bottle

Anyone can drop a marble or a coin into a bottle. But can it be done without touching the marble?

What to do: Be sure the open mouth of the bottle is larger than the marble or coin you are going to drop into it.

Cut a piece of cereal box material into a 4 inch (10 cm) square. Place the cardboard square on top of the bottle. Place the marble or coin on the cardboard so it is right over the mouth of the bottle. (It’s a good idea to hold off on using a marble until you see how this works. A coin is easier to handle.)

Flip the edge of the card hard and fast with your finger. If you’re thinking like a scientist, you’ll remember how you flipped one checker into another to move the bottom checker out of the stack.

What happens: The card snaps out from between the marble and the bottle. The marble drops into the bottle without you touching it. Pretty neat!

Why: The marble is standing still. Inertia wants to keep it that way. The card snaps away so quickly that the marble has no chance to follow the card. Gravity pulls it down into the bottle.

If the card moves too slowly, the marble will follow the card instead of falling into the bottle.

What now: If you want to be adventurous, try this with two marbles.

YOU NEED

- empty bottle
- piece of cereal box material
- scissors
- ruler
- marble or coin

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