THE JUMPING PENCIL

You need:
Large nail
Plastic bottle
Balloon
Pencil or swizzle stick

The Set Up
Using a large nail, punch a hold near the bottom of an empty, hard plastic bottle. Lower a balloon into the bottle and spread its mouth over the bottle’s mouth, as shown.

Inflate the balloon by blowing into it. Then put your thumb over the hole in the bottle. Your friends, unaware of the hole, will be puzzled by the fact that the balloon remains inflated.

Drop a pencil or swizzle stick into the balloon. Count to three. On the last count, remove your thumb from the hole. The balloon will deflate quickly, sending the pencil high into the air.

Why does it work?
When the balloon is inflated in the bottle and your finger covers the hole, this creates a partial vacuum that keeps outside air from rushing in. When the hole is uncovered, the vacuum is destroyed, and the balloon deflates so rapidly that it shoots out the pencil.