1. **Blow the paper ball into the bottle**

*What you need:*

* An empty plastic bottle.
* A small rolled up ball of paper, small enough to sit inside the mouth of the bottle.

*Instructions*

* Place the bottle on the edge of a table and put the ball of paper inside.
* Try to blow the paper into the bottle.
* It should shoot back out towards you.

*Why does it do that?*

The key point is that moving air is at a lower pressure than still air. In the case of the plastic bottle the air that is blown towards the mouth is deflected around the the sides of the bottle (very little moves past the piece of paper). This means that the air pressure in front of the ball of paper is lower than behind, and so the paper flies out.

1. **Squished Balloon**

*What you need:*

* jam jar
* balloon

*Instructions*

* Blow a balloon up so that it is just a bit larger than the opening of a large jam jar and can't be easily shoved in.
* Light a small wad of paper towel on fire and drop it into the jar. Place the balloon on top.
* When the fire goes out, lift the balloon... and the jar goes with it!

*Why does it do that?*

The air gets used up by the flame and lower the air pressure inside the jar. The surrounding air

1. **Balloon in a Bottle**

*What you need:*

* Balloon
* Plastic bottle

*Instructions*

* Cut the little hole on the side of the bottle
* Insert baloon into the bottle and strech it over the top.
* Put the finger on the hole and try to blow the baloon. You can’t do it.
* Put your mouth on the hole and suck air out of the bottle. Baloon blows up.

*Why does it do that?*

When you suck out air, pressure into the room and baloon is higher than in the bottle

1. **Fountain Bottle**

*What you need:*

* 2-liter plastic bottle
* a long straw
* modelling clay

*Instructions*

* Seal a 2-liter plastic bottle (half-full of water) with a lump of clay wrapped around a long straw
* seal the straw to the mouth of the bottle.
* Blow hard into the straw.
* Water gets forced up and out the straw, you get fountain.

*Why does it do that?*

As you blow air into the bottle, the air pressure increases. This higher pressure pushes on the water, which gets forced up and out the straw.