LevitAtinG BALL

Supplies:

toilet paper roll

ping pong ball

bendy straw

scissors

hole punch & tape (optional)

Directions:

1. Gather supplies listed above and have help cutting a slot out of the toilet paper roll. The slot should be halfway through the tube about ½ inch from the end and an inch high. (See picture above)
2. Cut or punch a hole just below the slot and slide the bendy end of the straw into it. Bend the end upwards and trim the straw so that it will not touch the bottom of the ball.
3. Optional: Tape the straw to the tube where the hole was cut such that the bent part is centered within the tube.
4. Place the ping pong ball on top and blow through the straw!

Why it works...

The basics of flight start with Bernoulli! Bernoulli was a Swiss mathematician who discovered that the faster air flows over the surface of something, the less the air pushes on that surface. That means that the air pressure on the object is lower than average. For today's experiment, that means that blowing air through a straw beneath a ball will cause the ball to levitate! Your air pushes the ball upwards but the fast flow of air around the sides creates a low pressure area that keeps the ball from shooting off somewhere else. It's like an invisible cage. This concept is what keeps airplanes in the sky as fast air moves over the upper surface of the wings and causes lift!

Thanks to VivifySTEM for this great activity!