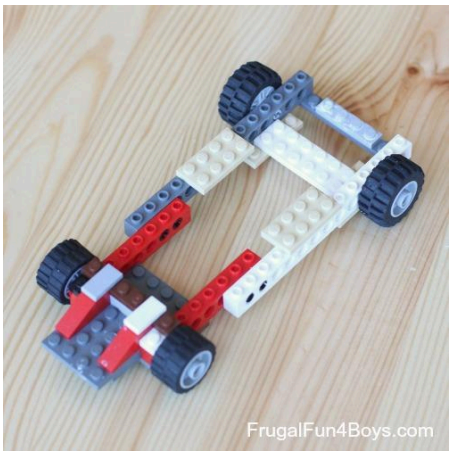
Build a Lego Bottle Car Racer

Using the lego pieces in your Simple Machines kit, a maximum of 2 rubber bands, and a plastic bottle, build a lego car that can be launched using the power of pressure, force and motion, to propel it. How far can your car go??? We will test and measure to find your best results! BE SURE TO RECORD YOUR RESULTS!!!!

Materials: Simple Machines kit, 2 rubber bands, and a plastic bottle



TIPS:

- Make sure the car is lightweight.
- When built, the opening of the bottle must not be in front of the back edge of the back wheel. If it is, you cannot properly load the racer into the launcher.
- Make sure that the car is strong enough to handle having the bottle attached with a tight rubber band and strong enough to withstand the launch.
- Make sure that the wheels of the car still spin freely when the bottle is attached.
- Watch for friction! Make sure that the wheels of the car spin freely when the bottle is launched. You want the nozzle of the bottle to be as low to the ground as possible so that the force is located on the same plane as the

wheels. This helps to overcome the friction between the wheels and the ground.
- You can add parts to the racer, such as a nose cone to make the racer more aerodynamic. But weigh design options carefully: too much weight can slow down the racer, parts sticking out awkwardly could make it less aerodynamic, and so forth.

Resources:

Aerodynamics