Experiment: Bottle Rockets

These notes are provided as reference. Do not simply print these and expect that this suffices as a complete science write-up.

Purpose: to discover the optimum conditions for

launching bottle rockets

Method: Please describe the steps to repeat this experiment.

Materials: 2L plastic pop bottle

one air pump launching pad water plug and tire valve

Diagram: Please draw a labelled diagram showing the launcher, the pump, the bottle and the expected trajectory of the rocket.

Observations:

water							
capacity	2L	2L	2L	2L	2L		
water volume	0 ml	20 ml	30 ml	40 ml	50ml	250ml	400ml
angle	45	45	45	45	45		
distance travelled	3 m	6m	8m	12 m	12m	20m	3m
aerodynamics	х	х	х	х	x	x	x

aerodynamics						
capacity	2L	2L	2L	2L		
water volume	100ml	100ml	100ml	100ml		
angle	45	45	45	45		
distance travelled	15m	12m	4m			
aerodynamics	cone	wing	2 wings			

Make sure to seat the valve firmly in order to create a tight seal when launching the rocket. This seemed to make the biggest difference to ensure a successful launch.

Conclusions and Reflection: Please any conclusions about how to make a successful launch for this experiment. You must also include at least two sources of error.