

Lab report example

[Science](#), [Physics](#)



Report The experiment aimed at establishing the relationship between projectile horizontal distance and angle of projection, with projections at different angles. Two projectile equipments were used, first was homemade catapult and a launcher that the physics department premade. Used equipments in the experiment were catapult and launcher, projectile (Penny), meter stick, protractor, sticky notes, and a calculator. The launcher was started with an angle of 100, horizontal distance measured, and the procedure repeated four times. Average value for the readings was obtained and recorded. The procedure was then repeated for the angles 200, 300, 400, 500, 600, 700, 800, and 900. The angle with the longest distance was noted and uncertainties calculated for distance and angle. The procedure was first followed for the home made catapult with angle range of between 00 and 1000 and single trials. A penny of mass 3.06g and 2.21g were used to the home made catapult and launcher respectively. The maximum distance was realized at 600 for both catapult (62 cm) and launcher (72.6 cm). Uncertainties were 5 cm for distance and 50 for angle. Theoretically, 450 should be the angle for maximum distance while the distance should be zero for projections at an angle of 900. This was however not the case because maximum distance was realized at 600. The recorded distance at this angle, however, corresponded with theoretical value of distance at 450. Distance was also not zero at 900 but was smallest at this angle. Even though the experimental results were different from theoretical expectation, they converged towards the expectations. Human error such as inaccurate measure of angles could have caused this.