October 14, 2022
Rocio Chavela Guerra, PhD
Jeffrey Stransky, MSc
Steven Royek
Engineering Hall 140,
201 Mullica Hill Road
chavelaguerra@rowan.edu

Dear Dr. Chavela Guerra, Mr. Stransky, and Prof. Royek,

Through a three variable parametric design process, the initial bottle rocket was able to be optimized to maximize flight distance. Nose cone mass, water volume, and tailfin shape were varied independently of one another to measure their individual contributions to distance traveled. Through this parametric approach, a well-rounded data set was produced. Through a convergent process, the rocket design was able to be further improved to identify a local maximum of optimal design parameters.

Kevin Hack
Lab Portion: Data analysis, experiment design
Report: Analysis & discussion

Aidan Sharpe
Lab Portion: Rocket builder, experiment designer, launches coordinator, lead report editor, report formatting, report figures and tables.
Report: Methods & equations

Tyler Torres
Lab portion: Data acquisition, rocket builder, experiment designer.
Report: Introduction, materials

Raaha Kumaresan
Lab portion: Data acquisition, rocket builder
Report: Introduction

If any questions or concerns arise, please contact one of the team members listed below and we will be happy to reply with further information.

Sincerely,

Aidan Sharpe Kevin Hack Tyler Torres Rahaa Kumaresan