Name(s) **Andrew D. Thompson**	Project Number # **S0218**

Project Title
Robotics

Abstract

Objectives/Goals
I. Purpose: Can a rover simulator consistently climb over objects that are as big as it self.

II. Hypothesis: I predict that 75% of the time, the rover simulator can climb an object equivalent to its own size. (Rover)

Methods/Materials
III. Methods and Materials: Light weight wheels, three motors (8 AA batteries), and a variety of K#nex pieces.

Methods: Design 1: The body was too long and when it tried to climb it got stuck on the top of an object.

Design 2: I took a shorter piece of K'nex and it would climb very well but it would sometimes have a hard time.

Design 3: I attached two more motors to the rover but it could not climb because the design of two motors on one set of wheels was not working together.

Design 4: I tried moving the motors from being one in the front to one in the middle and one in the back. This is the design that worked best.

Design 5: I tried the first motor in low gear so all three motors were in the same gear.

Design 6: I tried to move the wheels into different positions on the rover. It did not work.

In the end I decided to work with design 4.

Results
I have come to the conclusion that my rover can successfully climb rocks that are as tall as its own size (6in) 80% of the time. As the rock size increases the success rate decreases slightly with the exception of

Summary Statement
Robotics is similar to Mars Exploration Rover (MER) that is launching this summer, and I created and tested an original rover on my own.

Help Received
My mom helped me with my board and edited my spelling.