

Group Name _____

Group Members _____

Overview: In the initial construction of the robot the travelling characteristics are required. After characterising the properties, NASA have asked that you use your data to make predictions about the distance your robot will travel given specific time constraints.

Your group will be assigned a random power level to be assessed. Power Level Assigned _____

For this experiment you will need to measure how far the robot travels for different time values (eg. 1 second, 2 seconds, 3.5 seconds etc). The more data you gather, the more accurate your graph will be.

Plot the results either on the graph below or in a graphing software package.

(Hint: you will need to know the smallest and largest times you tested for, as well as the smallest and largest distances so that you can determine the horizontal and vertical axis scales)

Once you have plotted your data, can you see a relationship between the time taken and the distance travelled?

By looking at the graph, can you determine how many seconds your robot would need to travel exactly 30cm (12 inches)? _____ seconds

How about 1.5m (59 inches)? _____ seconds

Your teacher will assign you a test distance. How long does your robot need to travel this particular distance?

Test Distance = _____

Time required = _____ seconds

Distance Travelled vs Time Taken

Distance Travelled

Time Taken