C:\Users\yowell\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\NA8DQGH4\MC900241567[1].wmf**Putting Robots to Work with Force & Friction Activity – Making Robots Work Worksheet**

**Pre-Experiment Questions**

1. How can machines help us to move objects?

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1. What factors can make it easier or harder to push an object forward?

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**Data Collection**

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| --- | --- | --- | --- | --- |
| **Bottle Number** | **Predicted Weight of Sand (g)** | **Actual Weight of Sand (g)** | **Predicted Pushing of Sand (cm)** | **Actual Pushing of Sand (cm)** |
|  |  |  |  |  |
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**Analysis**

1. Why did the robot travel different distances for each *bottle of sand?* Hint: What remained the same? What was different?

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2. In the space below, create a line graph of the actual pushing distance vs. the actual weight of the sand.