

Friction Force Data Sheet

| Surface Combinations | Time |
|-------------------------------|------|
| Rubber tire on tile | |
| Without rubber tire on tile | |
| Rubber tire on carpet | |
| Without rubber tire on carpet | |

Data Table ↑ and Analysis Questions ↓

1. Which wheel set-up and surface combination caused the robot to take the longest time to complete the 10 foot race? Explain why.

2. Which wheel set-up and surface combination caused the robot to take the least time to complete the 10 foot race? Explain why.

3. If wheels do not have rubber tires, as in the case in our activity, would you consider the surface of the wheels to be slippery or rough? Can you make an educated guess on why car tires use rubber tires?

4. According to your observations, which pair of surfaces showed best traction? Please explain why.

Name: _____ Date: _____ Class: _____

5. In the space below, create a bar graph with the surface combinations on the x-axis and the time to complete the course on the y-axis.

