Lab 1

Out: Tuesday, 22 January 2013
Due: Thursday, 24 January 2013 (bring materials to lab in 302)
        Thursday, 31 January 2013 (full lab)
        Tuesday, 5 February 2013 (lab report)

Overview:

In this lab, you will use recycled materials to build a gripper capable of picking up ping pong balls and small rocks. The gripper can be operated by hand or with a motor.

You may work individually or with a partner.

For class on Thursday, 24 January:

Bring items with you to class that could be used to build a robot gripper. You can also use items found in the lab (302).

Lab, 24 January:

In the lab, you will start to build your gripper.

Lab, 31 January:

Your gripper must be finished at the start of the lab. In lab, everyone will demonstrate their gripper and we will discuss the pros and cons of each design.

Lab Report, due 5 February at the start of class:

Answers the following in your lab report:

1. Describe the design of your gripper and the materials you used. Include a photo of your gripper.
2. What was the inspiration for your design? (It is more than acceptable to have done research into different types of grippers for this lab.)
3. How well did your gripper work?
4. What would you have changed to improve it?
5. Which gripper(s) demonstrated in class would you want to see on our rover?