Test 1: Testing Strength

Objective: To test how much mass your bag can hold
1. Place a meter stick across two desks. Space the desks apart from each other.
2. Using a hole puncher or pencil create a hole at the top middle of your bag (3 cm from the top), on both sides of the bag.
3. Loop the string through the holes, over the meter stick and tie off the loop so that the bag is hanging.
4. Add weights to the bag, one at a time. Stop when the bag has become broken.
5. Record the mass that was held by the bag before it broke in your data table.

Test 2: Tearing Test

Objective: To test how easy it is to tear your bag
1. Choose one person in your group to tear your bag.
2. Attempt to tear the bag by pulling the opening of the bag, with two hands, in opposite directions.
3. Record in your data table: if it was easy or difficult to tear, as well as observations such as if it stretched rather than tear; how much it stretched; if it partially tore, etc.

Test 3: Stretch Test

Objective: To test how far a strip of the plastic bag stretches
1. Two people hold the ends of a 12 inch strip of your plastic and gently pull in opposite directions as far as possible.
2. Calculate the difference from the original 12 inches and the stretched length.
3. Record the length in the data table.

Test 4: Testing for Air Capacity

Objective: To test how much air your bag can hold
1. Using the air pump, count the number of pumps needed to fill your bag to capacity (that is when you can no longer add air).
2. Record the number of pumps in your data table.

Test 5: Testing for Water Capacity

Objective: To test the volume (ml) of water your bag can hold
1. Using a measuring cup fill your bag to capacity (that is until it can no longer hold additional water).
2. Record the total volume (ml) in your data table.
3. Empty your bag into the sink or dump bucket.

Test 6: Puncture Test

Objective: To test the ease at which your bag can be punctured
1. Hold your bag tightly from each of the 4 corners (two group members needed).
2. Another group member should use a pencil to attempt to press a hole into the center of the bag.
3. Record in the data table. if it was easy or difficult to puncture, as well as additional observations.