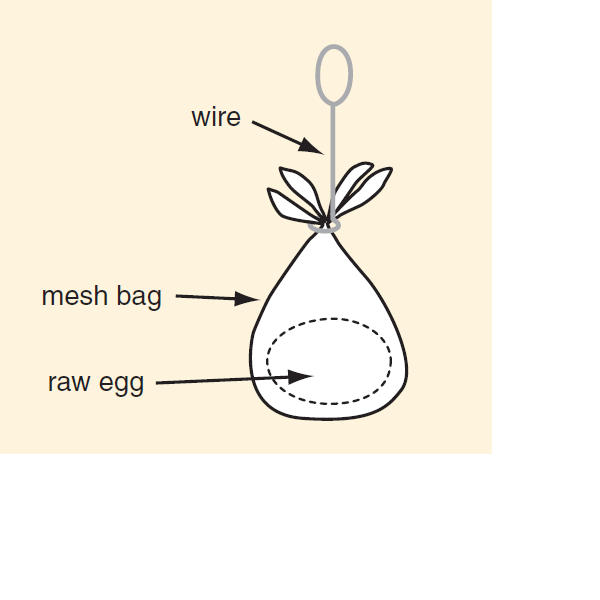
# *Egg bungee jump* **Student investigation sheet**

## Materials and equipment per group

* egg
* plastic sandwich bag
* wire length
* rubber bands
* metre ruler
* retort stand
* boss head and clamp
* pair of pliers

## Procedure

1. Put the egg in the plastic sandwich bag and wrap the top tightly with one end of the wire. Make a loop at the other end of the wire on which to attach the rubber bands.



plastic sandwich bag

1. On the lab bench place a retort stand with a boss head and clamp attached with the clamp facing out over the edge of the bench.
2. Thread one rubber band through the wire loop on the ‘egg package’ and back through itself so it is attached to the wire. Then hang the other end of the rubber band over the clamp shaft.
3. Drop the egg from the height of the **bottom** of the clamp shaft. Measure and record how far the eggs falls. Repeat several times if desired. Design a suitable results table.

**NOTE:** Group members should follow their roles as outlined at the demonstration phase.

1. Loop a second rubber band through the first one and thread it back through itself to tie it in place. Drop the egg again and measure and record its fall. Repeat several times if desired.
2. Repeat for three and four rubber bands. You may NOT use more than four rubber bands for this part of the data collection.
3. Plot a scatter graph of distance fallen (y-axis) v the number of rubber bands (x-axis).
4. From your graph or via an equation, predict the number of rubber bands to use for a ‘safe’ 1.5 metre ‘test’ drop.

## Your goal

You want your egg to get as close to the floor as possible (without hitting) when dropped from a height of 1.5 metres using your bungee cord with the appropriate number of rubber bands. You will get three trials with adjustments permitted in between each trial.

## Your mark

1. You must show your properly labelled data table and graph to your teacher.
2. Your mark will be 100 minus the number of centimetres above the floor on your best egg drop.
3. If the egg hits on all three trials and your data table and graph were correct you will get a score of 80 (but you shouldn’t ‘abuse’ your egg like that!)