# Investigation 2: Does air weigh anything?

Many potato chip manufacturers put air in their bags to prevent the chips from breaking into small pieces. Your job as a food scientist is to determine if the air in the bag will affect the amount of chips that the manufacturers place in the bag. To do this, you need to determine if air weighs anything.

## Materials:

* 2 balloons
* 1 set of balancing scales

## Variables:

1. Place one balloon on each side of the scales to check that they are balanced.
2. Draw the arrangement of balloons and scales below.
3. Write a list of all the things that you could change about this arrangement, including adding air to the balloons. These are all the variables in the experiment.

In any experiment, you can only change one variable. Circle the variable you will change in your experiment that will allow you to answer the question: *Does air weigh anything*?

1. How will you make sure the other variables will not change during the experiment?

## Prediction:

1. Predict what will happen when you change your variable in the arrangement of balloons and balancing scales.

## Results:

Food scientists must present their results in an organised manner.

Draw a table that allows you to organise your observations.

## Conclusion:

1. Does air weigh anything?
2. What evidence do you have to support your conclusion?
3. Is your test a fair test? Why or why not?
4. What effect will adding air to a packet of chips have on the amount of chips in the packet?