In this experiment we are going to find out how much you can lift with just a short strip of Velcro.

- Pour some rice into the plastic container, screw the lid on tightly, and weigh it.
 Write the weight in the top line of the table below.
- Press your strip of Velcro onto the piece attached to the lid of the container and see if you can use it to lift the container.
- If you can, write YES in the table. Add some more rice and try again.
- If you cannot lift the container, write NO, pour a bit of rice out, and try again.

After you have taken a few measurements - but before you have completed the table - you may like to answer the questions on page 2.

Mass of container and rice	Can you lift it with the Velcro?

Write down anything you did to make sure the experiment was a 'fair test'.	
	
Sometimes you may be able to lift the container for just a few seconds, but then it	
falls off. Can you make a rule to decide what counts as a successful lift?	
I have said that the Velcro lifted the container if	

In this table you are going to re-enter the information from your measurements on page 1, but this time you will enter them in order, starting with the smallest mass and ending with the largest mass.

Can you lift it with the Velcro?

What is the largest amount that you could lift with the strip of Velcro?

In this table you are going to re-enter the information from your measurements on page 1, but this time you will enter them in order, starting with the smallest mass and ending with the largest mass.

Mass of container and rice	Can you lift it with the Velcro?

When we measure the container (and the rice inside it) we are measuring its mass, which is measured in grams (g) or kilograms (kg).
Forces are measured in Newtons (N) . To convert mass in kilograms into a force in Newtons we multiply by 10. To convert mass in grams into a force in Newtons we divide by 100.
What is the maximum mass that you can lift with the Velcro?
What is the force needed to pull the Velcro apart?(Your answer will be in Newtons.)

Finding out how Velcro Works

Run your finger over the two strips of Velcro. What do you notice? Describe the differences between the two strips.
One of the strips of Velcro is covered in tiny little plastic hooks. The other is covered in fine threads, which make loops. Do you think the piece of Velcro glued to the lid of the container has hooks or loops?
When you press the two strips of Velcro together, some of the loops catch on to some of the hooks - making it difficult to pull the two pieces apart. Why do you think the Velcro fasteners on shoes work better when your shoes are new than when they are a few months old?