

## A weighty question



### Background knowledge

If a man stood on the Moon, he would stay the same size. His mass would not change. However, if he weighed himself on the Moon, he would weigh less. Your weight is caused by the pull of gravity. The Moon is smaller than Earth, so it has less gravitational pull. For example, a person who weighs 300 N on Earth will weigh about 120 N on the Moon.

### Science activity

Imagine that some settlers have left Earth and gone to the Moon, taking their recipe books with them. The first cake they baked was a disaster. It had far too little moisture and was about six times the size they had expected.

The cake recipe was

1.25 N	butter
1.50 N	sugar
4	eggs
1.50 N	flour
20 ml	milk



Why was the cake so big? Why was it so dry?

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### Science investigation

**⚠ Take extra care - ask an adult to supervise you.**

Can you compare objects further on the Moon than on Earth? To find out, make a catapult using a thick rubber band. On Earth, objects weigh about six times what they do on the Moon. Draw tape together 3 pieces (weight of an object on the Moon), then draw tape together 18 pieces (weight of an object on Earth). Compare both sets of pieces. Predict which one will travel the furthest.

