Measuring Gravity

Measure the weight and mass of different objects. Do you think there will be a link between the weight and mass of each object? (Think about whether the mass of each object will be the same as its weight. Or will the mass be higher than the weight? Or will it be lower? Or maybe you think there will be no link at all!)

Record the mass and weight of each object in the table below.

Object	Mass (kg)	Weight (N)

Did you notice a link between the weight and mass of each object?

Describe what you found out below.

Fill in the key words below to explain how gravity gives objects their weight.

All objects are made of _____, or stuff. The amount of matter they are made of is called their mass. This is measured in _____.

_____ pulls all objects down towards the _____ of the Earth. It pulls objects with a larger mass down with a stronger _____. The pulling force of gravity on an object is its weight. It is measured in _____.

Key words:	newtons	gravity	force	matter	centre	kilograms

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Explain how gravity gives objects their weight. Refer to the difference between weight and mass, and the units of measurement for both weight and mass.

Measuring Gravity **Answers**

Do you think there will be a link between the weight and mass of each object?
Accept appropriately justified predictions.

Did you notice a link between the weight and mass of each object?
Example answer: ***My results show that the weight in newtons is about ten times bigger than the mass in kg. 1kg weighs around 10 newtons on Earth.***

Fill in the key words below to explain how gravity gives objects their weight.

All objects are made of ***matter***, or stuff. The amount of matter they are made of is called their mass. This is measured in ***kilograms***.

Gravity pulls all objects down towards the ***centre*** of the Earth. It pulls objects with a larger mass down with a stronger ***force***. The pulling force of gravity on an object is its weight. It is measured in ***newtons***.

Explain how gravity gives objects their weight. Refer to the difference between weight and mass, and the units of measurement for both weight and mass.

Look for understanding of the concepts explained in the answer above.